College of Agriculture

Overview

Purdue University's College of Agriculture is one of the world's leading colleges of agricultural, food, life, and natural resource sciences. As a land-grant institution, we are committed to preparing our students to make a difference, wherever their careers take them; stretching the frontiers of science to find solutions to some of our most pressing global challenges; and, through Purdue Extension and engagement programs, helping the people of Indiana, the nation and the world improve their lives and livelihoods.

Undergraduate Degree

Your undergraduate program will blend courses and experiences in your major with preparation in the life and physical sciences, written and oral communication, social sciences and humanities, multicultural awareness, and international understanding. Professional work experiences, leadership development, participation in student organizations, study abroad, and directed research can add to your professional development.

Program Information for Undergraduate: Undergraduate College of Agriculture Programs

Graduate Degree

Your master's or doctoral program will be specialized and flexible to prepare you to meet your professional objectives. You'll find that we offer a growing number of multidisciplinary graduate degree programs, using directed experiences and courses from faculty members in one or more Purdue departments or colleges. Business and industry, government, and academic institutions throughout the world recruit our graduates for leading positions.

Program Information for Graduate: Graduate College of Agriculture Programs

Website: College of Agriculture (purdue.edu)
Overview

Purdue Agriculture is one of the world's leading colleges that offers food, agricultural, and natural resources programs. We train the next generation, who will drive innovation and discovery to reshape life sciences, biosecurity, the environment, agriculture, and the food system. Purdue Agriculture graduates are in great demand. During the past two decades, more than 90 percent of our graduates were employed or were enrolled in graduate or professional schools within three months of graduation.

Undergraduate Degree

Your undergraduate program will blend courses and experiences in your major with preparation in the life and physical sciences, written and oral communication, social sciences and humanities, multicultural awareness, and international understanding. Professional work experiences, leadership development, participation in student organizations, study abroad, and directed research can add to your professional development.

Admissions

Teacher Education Program (TEP) Requirements and Milestones

Advising

<table>
<thead>
<tr>
<th>Department</th>
<th>Contact</th>
<th>Phone Number</th>
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</thead>
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Contact Information

College of Agriculture  
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Phone: 765-494-8470

**Bachelor of Science**

**Interdisciplinary Agriculture, BS**

Degree Requirements

**120 Credit Hours**

Departmental/Program Major Courses (1 credit)

Required Courses (1 credit)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University **Credits:** 0.50
- AGR 1XXX - Introduction to Departmental Academic Programs - Credit Hours: .50

Other Departmental/Program Course Requirements (92-94 credits)

- MA 15800 - Precalculus - Functions And Trigonometry **Credits:** 3.00 or
- MA 16010 - Applied Calculus I **Credits:** 3.00
- AGE 21700 - Economics **Credits:** 3.00
- BIOL 11000 - Fundamentals Of Biology I **Credits:** 4.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00
• CHM 11200 - General Chemistry Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• Agriculture Selective - Credit Hours: 15.00
• Agriculture Selective (30000+ level) - Credit Hours: 21.00
• Mathematics or Science Selective - Credit Hours: 9.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Science, Technology and Society - Credit Hours: 3.00 (satisfies Science, Technology, & Society for core)
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (25-27 credits)

• Electives - Credit Hours: 25.00-27.00

Supplemental List

Interdisciplinary Agriculture Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy
Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

GPA Requirements

- 2.00 GPA required for Bachelor of Science degree.

Course Requirements and Notes

- Baccalaureate degree plans of study must include a capstone course or experience. Capstone course credits also may be used to fulfill core curriculum requirements or departmental requirements or electives.

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:
- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 1XXXX - Introduction to Departmental Academic Programs - Credit Hours: .50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00
- Agricultural Selective - Credit Hours: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
- CHM 11200 - General Chemistry Credits: 3.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 or
- MA 16010 - Applied Calculus I Credits: 3.00
- Agricultural Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- AGEC 21700 - Economics Credits: 3.00
- Agricultural Selective - Credit Hours: 3.00
- Human Cultures: Humanities - Credit Hours: 3.00
- Mathematics and Science Selective - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00
15 Credits

Spring 2nd Year

- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Agricultural Selective - Credit Hours: 6.00
- Science, Technology & Society Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

15 Credits

Fall 3rd year

- Agricultural Selective (30000+ Level) - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Mathematics and Science Selective - Credit Hours: 6.00
- Written or Oral Communication Selective (20000+ Level) - Credit Hours: 3.00

15 Credits

Spring 3rd Year

- Agricultural Selective (30000+ Level) - Credit Hours: 6.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 6.00

15 Credits

Fall 4th Year

- Agricultural Selective (30000+ Level) - Credit Hours: 6.00
- Elective - Credit Hours: 9.00

15 Credits

Spring 4th Year

- Agricultural Selective (30000+ Level) - Credit Hours: 6.00
- Humanities or Social Science Selective (30000+ Level) - Credit Hours: 3.00
- Elective - Credit Hours: 5.00-6.00

14-15 Credits

Pre-Requisite Information
World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

College of Agriculture Administration

About Agricultural Administration

Purdue University's College of Agriculture is one of the world's leading colleges of agricultural, food, life, and natural resource sciences. As a land-grant institution, we are committed to preparing our students to make a difference, wherever their careers take them; stretching the frontiers of science to find solutions to some of our most pressing global challenges; and, through Purdue Extension and engagement programs, helping the people of Indiana, the nation and the world improve their lives and livelihoods.

Also housed within the College of Agriculture Office of Academic Programs are interdisciplinary degrees, minors, certificates, and pre-programs. See below for more detailed information.

College of Agriculture Academic Programs (website)

Interdisciplinary Agriculture, BS Students are not admitted directly into this major. See your advisor for more information.
Natural Resources and Environmental Science

NRES is a unique and exciting major for students who want to contribute to environmental change in the world. It is an interdisciplinary applied science-based program that focuses on environmental restoration, management, policy, and science. With guidance from your advisor, you will design a plan of study in one of six concentrations.

Bachelor of Science

Natural Resources and Environmental Science: Climate and Energy Solutions Concentration, BS

About the Program

Natural Resources and Environmental Science (NRES) is an interdisciplinary program that combines broad environmental knowledge and technical competency, with understanding of the economic, policy and human factors of environmental management to develop graduates who are well-equipped to deal with the environmental challenges of the 21st century. Students can choose from one of six concentration areas: energy and climate solutions, environmental policy and analysis, watershed
management, environmental quality and restoration, sustainability science or emerging environmental challenges. NRES graduates work in an exciting variety of environmentally related careers in the public and private sector, including state and federal agencies, consulting firms and non-profits.

Students in the Climate and Energy Solutions Concentration choose 21 credit hours of course work to support evaluation of climate impacts, adaptation and mitigation, and alternative energy solutions.

Natural Resources and Environmental Science Website

Natural Resources and Environmental Science Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (35 credits)

Required Major Courses (11 credits)

• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
• NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, and Society for core)
• NRES 20000 - Introduction To Environmental Careers Credits: 1.00
• NRES 25500 - Soil Science Credits: 3.00 or
• AGRY 25500 - Soil Science Credits: 3.00 or
• AGRY 27000 - Forest Soils Credits: 3.00
• NRES 33800 - Environmental Field Skills Credits: 1.00 or
• AGRY 33800 - Environmental Field Skills Credits: 1.00
• NRES 42000 - Environmental Internship Reporting Credits: 1.00 (Capstone)
• NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00 (Capstone)

Climate and Energy Solutions Concentration Courses (24 credits)

Climate And Energy Solutions Required Courses (12 credits)

• AGRY 33500 - Weather And Climate Credits: 3.00 or
• NRES 23000 - Survey Of Meteorology Credits: 3.00
• EAPS 22500 - Science Of The Atmosphere Credits: 3.00
• MA 16020 - Applied Calculus II Credits: 3.00
• POL 32700 - Global Green Politics Credits: 3.00
Climate and Energy Solutions Selective Courses (12 credits)

- AD 39700 - Sustainability In The Built Environment Credits: 3.00
- ANTH 21000 - Technology And Culture Credits: 3.00
- ASEC 35500 - Controversial Science And Media In The Public Sphere Credits: 3.00
- EAPS 10900 - The Dynamic Earth Credits: 3.00
- EAPS 31500 - Biogeochemistry Credits: 3.00
- EAPS 32700 - Climate, Science And Society Credits: 3.00
- EAPS 37500 - Great Issues - Fossil Fuels, Energy And Society Credits: 3.00
- EAPS 42000 - Global Change Modeling Credits: 3.00
- EAPS 53000 - Extreme Weather And Climate: Science And Risk Credits: 3.00
- ECET 22400 - Electronic Systems Credits: 3.00
- EPCS 40100 - Senior Participation In EPICS Credits: 1.00 or
- EPCS 40200 - Senior Participation In EPICS Credits: 2.00
- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- MET 53000 - Facilities Engineering Technology Credits: 3.00
- NRES 38010 - Hazardous Waste Handling Credits: 3.00
- PHIL 40300 - Moral Psychology And Climate Change Credits: 3.00
- POL 42800 - The Politics Of Regulation Credits: 3.00

Other Departmental/Program Course Requirements (63-70 credits)

- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00 or
- CHM 11500 - General Chemistry Credits: 4.00 (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00 (satisfies Science #2 for core)
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 or
- CHM 25700 - Organic Chemistry Credits: 4.00
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 (satisfies Humanities or Social Science Selective (30000+ level)) or
- SOC 34400 - Environmental Sociology Credits: 3.00
- ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
  Science Communication Selective - Credit Hours: 3.00
- ASEC 38500 - Communication Strategies For Controversial Issues In ANR Credits: 3.00
- ASEC 48500 - Environmental Communication Credits: 3.00
- ASEC 58500 - Science Communication Credits: 3.00
- ENGL 42000 - Business Writing Credits: 3.00
- ENGL 42100 - Technical Writing Credits: 3.00
- ENTM 20100 - Scientific And Technical Communication Credits: 3.00
- NRES 48500 - Environmental Communications Credits: 3.00
- SFS 48500 - Environmental Communication Credits: 3.00
  Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
- COM 21700 - Science Writing And Presentation Credits: 3.00
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
  Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00
- ENGL 10800 - First Year Composition Credits: 3.00
- HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
- Broadening Science Selective - Credit Hours: 1.00-3.00
- Data Science Selective - Credit Hours: 3.00
- Ecology Selective - Credit Hours: 2.00-3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Social Sciences Selective - Credit Hours: 3.00 (any AGEC, ANTH, ECON, EDPS, POL, PSY, SOC course from the AG Humanities/Social Science list)
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (15-20 credits)
- Electives - Credit Hours: 15.00-20.00

Supplemental Lists

Selective courses: Natural Resources and Environmental Science Supplemental Information

College of Agriculture & University Level Requirements
- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

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• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

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Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

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• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement
• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.

• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
• NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, and Society for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• CHM 11100 - General Chemistry Credits: 3.00 or
• CHM 11500 - General Chemistry Credits: 4.00
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 or
• COM 21700 - Science Writing And Presentation Credits: 3.00 or
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

16-17 Credits

Spring 1st Year

• CHM 11200 - General Chemistry Credits: 3.00 or
• CHM 11600 - General Chemistry Credits: 4.00
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00 or
• ENGL 10800 - First Year Composition Credits: 3.00 or
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• Elective - Credit Hours: 2.00

14-16 Credits
Fall 2nd Year

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
- NRES 25500 - Soil Science Credits: 3.00 or
- AGRY 25500 - Soil Science Credits: 3.00 or
- AGRY 27000 - Forest Soils Credits: 3.00
- NRES 20000 - Introduction To Environmental Careers Credits: 1.00
- Broadening Science Selective - Credit Hours: 1:00-3:00
- Microeconomics Selective - Credit Hours: 3.00

12-14 Credits

Spring 2nd Year

- AGRY 33800 - Environmental Field Skills Credits: 1.00 or
- NRES 33800 - Environmental Field Skills Credits: 1.00
- AGRY 33500 - Weather And Climate Credits: 3.00 or
- NRES 23000 - Survey Of Meteorology Credits: 3.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
- MA 16020 - Applied Calculus II Credits: 3.00 (Additional Math or Statistics Selective)
- Data Science Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

17 Credits

Fall 3rd Year
- ILS 25000 - Introduction To Geographic Information Systems **Credits**: 3.00
- NRES 42000 - Environmental Internship Reporting **Credits**: 1.00
- POL 32700 - Global Green Politics **Credits**: 3.00
- CHM 25500 - Organic Chemistry For The Life Sciences I **Credits**: 3.00 or
  CHM 25700 - Organic Chemistry **Credits**: 4.00
- Elective - Credit Hours: 4.00

**14-15 Credits**

**Spring 3rd Year**

- FNR 37500 - Human Dimensions of Natural Resource Management **Credits**: 3.00 or
- SOC 34400 - Environmental Sociology **Credits**: 3.00
- Climate and Energy Concentration Selective - Credit Hours: 3.00
- Ecology Selective - Credit Hours: 2.00-3.00
- Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 4.00

**15-16 Credits**

**Fall 4th Year**

- AGEC 40600 - Natural Resource And Environmental Economics **Credits**: 3.00
- EAPS 22500 - Science Of The Atmosphere **Credits**: 3.00
- Science Communication Selective - Credit Hours: 3.00
- Climate and Energy Concentration Selective - Credit Hours: 3.00
- Elective - Credit Hours: 1.00-4.00

**13-16 Credits**

**Spring 4th Year**

- NRES 49700 - Current Topics In Environmental Sciences **Credits**: 2.00
- Climate and Energy Concentration Selective - Credit Hours: 3.00
- Climate and Energy Concentration Selective - Credit Hours: 3.00
- Elective - Credit Hours: 4.00
- Elective - Credit Hours: 0.00-4.00

**12-16 Credits**

**Pre-Requisite Information**
World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Natural Resources and Environmental Science: Emerging Environmental Challenges Concentration, BS

About the Program

Natural Resources and Environmental Science (NRES) is an interdisciplinary program that combines broad environmental knowledge and technical competency, with understanding of the economic, policy and human factors of environmental management to develop graduates who are well-equipped to deal with the environmental challenges of the 21st century. Students can choose from one of six concentration areas: energy and climate solutions, environmental policy and analysis, watershed management, environmental quality and restoration, sustainability science or emerging environmental challenges. NRES graduates work in an exciting variety of environmentally related careers in the public and private sector, including state and federal agencies, consulting firms and non-profits.

Students selecting Emerging Environmental Challenges work with the faculty directors to build a meaningful plan of study in an environmental focus area of their choosing.

Natural Resources and Environmental Science Website
Natural Resources and Environmental Science Major Change (CODO) Requirements
Degree Requirements

120 Credits Required

Departmental/Program Major Courses (35 credits)

Required Major Courses (11 credits)

- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
- FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
- NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology & Society Selective for core)
- NRES 20000 - Introduction To Environmental Careers Credits: 1.00
- NRES 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 27000 - Forest Soils Credits: 3.00 ♦
- NRES 33800 - Environmental Field Skills Credits: 1.00 or
- AGRY 33800 - Environmental Field Skills Credits: 1.00
- NRES 42000 - Environmental Internship Reporting Credits: 1.00 (Capstone)
- NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00 (Capstone)

Emerging Environmental Challenges Concentration Courses (24 credits)

- Additional Mathematics or Statistics Selective - Credit Hours: 3.00
- Emerging Environmental Challenges Selective - Credit Hours: 21.00

Other Departmental /Program Course Requirements (63-70 credits)

- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00 ♦
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 or
- CHM 11500 - General Chemistry Credits: 4.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00 ♦ (satisfies Science #2 for core)
• CHM 25500 - Organic Chemistry For The Life Sciences | Credits: 3.00 ♦ or
• CHM 25700 - Organic Chemistry | Credits: 4.00 ♦
• FNR 22310 - Introduction To Environmental Policy | Credits: 3.00 ♦
• POL 22300 - Introduction To Environmental Policy | Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management | Credits: 3.00 ♦ or
• SOC 34400 - Environmental Sociology | Credits: 3.00 ♦
• ILS 25000 - Introduction To Geographic Information Systems | Credits: 3.00
• MA 16010 - Applied Calculus | Credits: 3.00 (satisfies Quantitative Reasoning for core)
• STAT 30100 - Elementary Statistical Methods | Credits: 3.00 (satisfies Information Literacy for core)
  Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness | Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy | Credits: 3.00
• ECON 25100 - Microeconomics | Credits: 3.00
  Oral Communication Selective ♦ - Credit Hours: 3.00 (satisfies Oral Communication for core)
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills | Credits: 3.00
• COM 21700 - Science Writing And Presentation | Credits: 3.00
• COM 11400 - Fundamentals Of Speech Communication | Credits: 3.00
  Science Communication Selective - Credit Hours: 3.00
• ASEC 38500 - Communication Strategies For Controversial Issues In ANR | Credits: 3.00
• ASEC 48500 - Environmental Communication | Credits: 3.00
• ASEC 58500 - Science Communication | Credits: 3.00
• ENGL 42000 - Business Writing | Credits: 3.00
• ENGL 42100 - Technical Writing | Credits: 3.00
• ENTM 20100 - Scientific And Technical Communication | Credits: 3.00
• NRES 48500 - Environmental Communications | Credits: 3.00
• SFS 48500 - Environmental Communication | Credits: 3.00
  Written Communication Selective ♦ - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• ENGL 10600 - First Year Composition With Conferences | Credits: 4.00
• ENGL 10800 - First Year Composition | Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing | Credits: 3.00
• Broadening Science Selective - Credit Hours: 1.00-3.00
• Data Science Selective - Credit Hours: 3.00
• Ecology Selective - Credit Hours: 2.00-3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Social Sciences Selective - Credit Hours: 3.00 (any AGEC, ANTH, ECON, EDPS, POL, PSY, SOC course from the AG Humanities/Social Science list)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (15-20 credits)

• Electives - Credit Hours: 15.00-20.00

Supplemental Lists

Selective courses: Natural Resources and Environmental Science Supplemental Information
College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

Transfer Credit Policy

- Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (3000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 ♦ or
• CHM 11500 - General Chemistry Credits: 4.00 ♦
• MA 16010 - Applied Calculus I Credits: 3.00 ♦ (satisfies Quantitative Reasoning for core)
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
- NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, Society for core)
  Oral Communication Selective ♦ - Credit Hours: 3.00
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
- COM 21700 - Science Writing And Presentation Credits: 3.00
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00

16-17 Credits

Spring 1st Year

- CHM 11200 - General Chemistry Credits: 3.00 ♦ or
- CHM 11600 - General Chemistry Credits: 4.00
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
  Written Communication Selective ♦ - Credit Hours: 3.00-4.00
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00
- ENGL 10800 - First Year Composition Credits: 3.00
- HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
- Elective - Credit Hours: 2.00-4.00

14-18 Credits

Fall 2nd Year

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
- AGRY 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 27000 - Forest Soils Credits: 3.00 ♦ or
- NRES 25500 - Soil Science Credits: 3.00
- NRES 20000 - Introduction To Environmental Careers Credits: 1.00
- Broadening Science Selective - Credit Hours: 1.00-3.00
- Microeconomics Selective - Credit Hours: 3.00
12-14 Credits

Spring 2nd Year

- AGRY 33800 - Environmental Field Skills Credits: 1.00 or
- NRES 33800 - Environmental Field Skills Credits: 1.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- Additional Math or Statistics Selective - Credit Hours: 3.00
- Data Science Selective - Credit Hours: 3.00
- Emerging Environmental Challenges Concentration Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

17 Credits

Fall 3rd Year

- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦ or
- CHM 25700 - Organic Chemistry Credits: 4.00
- ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
- NRES 42000 - Environmental Internship Reporting Credits: 1.00
- Elective - Credit Hours: 2.00-4.00
- Emerging Environmental Challenges Concentration Selective - Credit Hours: 3.00
- Emerging Environmental Challenges Concentration Selective - Credit Hours: 3.00

16-17 Credits

Spring 3rd Year

- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 (satisfies College of Ag's 300+ Level of Social Science or Humanities Selective) ♦ or
- SOC 34400 - Environmental Sociology Credits: 3.00 ♦
- Emerging Environmental Challenges Concentration Selective - Credit Hours: 3.00
- Emerging Environmental Challenges Concentration Selective - Credit Hours: 3.00
- Ecology Selective - Credit Hours: 2.00-3.00
• Elective - Credit Hours: 1.00-3.00

13-14 Credits

Fall 4th Year

• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00 ♦
• Emerging Environmental Challenges Concentration Selective - Credit Hours: 3.00
• Science Communication Selective - Credit Hours: 3.00
• Elective - Credit Hours: 4.00-5.00

13-14 Credits

Spring 4th Year

• NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00
• Emerging Environmental Challenges Selective - Credit Hours: 3.00
• Social Science Selective (30000+ level) - Credit Hours: 3.00
• Elective - Credit Hours: 2.00-4.00
• Elective - Credit Hours: 2.00-4.00

12-16 Credits

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS-Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Pre-Requisite Information**

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

**Natural Resources and Environmental Science: Environmental Policy and Analysis Concentration, BS**

**About the Program**

Natural Resources and Environmental Science (NRES) is an interdisciplinary program that combines broad environmental knowledge and technical competency, with understanding of the economic, policy and human factors of environmental management to develop graduates who are well-equipped to deal with the environmental challenges of the 21st century.

Students can choose from one of six concentration areas: energy and climate solutions, environmental policy and analysis, watershed management, environmental quality and restoration, sustainability science or emerging environmental challenges. NRES graduates work in an exciting variety of environmentally related careers in the public and private sector, including state and federal agencies, consulting firms and non-profits.

Students in the Environmental Policy and Analysis Concentration choose 21 credit hours of course work in policy, management and economics in order to address environmental challenges.

**Natural Resources and Environmental Science Website**

**Natural Resources and Environmental Science Major Change (CODO) Requirements**

**Degree Requirements**

**120 Credits Required**

Departmental/Program Major Courses (35 credits)

Required Major Courses (11 credits)
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
• NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology & Society Selective for core)
• NRES 20000 - Introduction To Environmental Careers Credits: 1.00
• NRES 25500 - Soil Science Credits: 3.00 ♦ or
• AGRY 25500 - Soil Science Credits: 3.00 ♦ or
• AGRY 27000 - Forest Soils Credits: 3.00 ♦
• AGRY 33800 - Environmental Field Skills Credits: 1.00 or
• NRES 33800 - Environmental Field Skills Credits: 1.00
• NRES 42000 - Environmental Internship Reporting Credits: 1.00 (Capstone)
• NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00 (Capstone)

Environmental Policy And Analysis Concentration Courses (24 credits)

Required Concentration Courses (9 Credits)

• AGEC 52500 - Environmental Policy Analysis Credits: 3.00
• ASEC 58500 - Science Communication Credits: 3.00
• POL 32700 - Global Green Politics Credits: 3.00 ♦

Environmental Policy And Analysis Selectives (15 credits)

• Additional Mathematics or Statistics Selective - Credit Hours: 3.00
• Environmental Policy And Analysis Selectives - Credit Hours: 12.00

Other Departmental/Program Course Requirements (63-70 credits)

• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00 ♦
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
• ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core) or
• CHM 11500 - General Chemistry Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core) or
• CHM 11600 - General Chemistry Credits: 4.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦ or
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 (satisfies College of Ag's 300+ Level of Social Science or Humanities Selective) ♦ or
• SOC 34400 - Environmental Sociology Credits: 3.00 ♦
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00 (satisfies College of Ag's Social Science Selective)
  Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
  Oral Communication ♦ - Credit Hours: 3.00 (satisfies Oral Communication for core)
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
  Science Communication Selective - Credit Hours: 3.00
• ASEC 38500 - Communication Strategies For Controversial Issues In ANR Credits: 3.00
• ASEC 48500 - Environmental Communication Credits: 3.00
• ASEC 58500 - Science Communication Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00
• ENTM 20100 - Scientific And Technical Communication Credits: 3.00
• NRES 48500 - Environmental Communications Credits: 3.00
• SFS 48500 - Environmental Communication Credits: 3.00
  Written Communication Selective ♦ - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00
• ENGL 10800 - First Year Composition Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• Broadening Science Selective - Credit Hours: 1.00-3.00
• Data Science Selective - Credit Hours: 3.00
• Ecology Elective - Credit Hours: 2.00-3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Social Science Selective - Credit Hours: 3.00 (any AGEC, ANTH, ECON, EDPS, POL, PSY, SOC course from the AG Humanities/Social Science list)
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

**Electives (15-22 credits)**

- Electives - Credit Hours: 15.00-22.00

**Supplemental Information**

Selective courses: Natural Resources and Environmental Science Supplemental Information

**College of Agriculture & University Level Requirements**

- College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

**College of Agriculture Pass/No Pass Policy**

College of Agriculture Undergraduate Pass/No Pass Policy

**Transfer Credit Policy**

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

**GPA Requirements**

- 2.0 GPA required for Bachelor of Science degree.

**GPA Requirements**

- 2.0 GPA required for Bachelor of Science degree.

**Transfer Credit Policy**
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University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 ♦ or
• CHM 11500 - General Chemistry Credits: 4.00
• MA 16010 - Applied Calculus I Credits: 3.00
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
• NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, Society for core)
  Oral Communication ♦ - Credit Hours: 3.00
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

16-17 Credits

Spring 1st Year

• CHM 11200 - General Chemistry Credits: 3.00 ♦ or
• CHM 11600 - General Chemistry Credits: 4.00
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
  Written Communication Selective ♦ - Credit Hours: 3.00-4.00
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00
• ENGL 10800 - First Year Composition Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• Elective - Credit Hours: 3.00-4.00

15-18 Credits
Fall 2nd Year

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- NRES 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 27000 - Forest Soils Credits: 3.00 ♦
- NRES 20000 - Introduction To Environmental Careers Credits: 1.00
- Broadening Science Selective - Credit Hours: 1.00-3.00
- Microeconomics Selective - Credit Hours: 3.00

12-14 Credits

Spring 2nd Year

- AGRY 33800 - Environmental Field Skills Credits: 1.00 or
- NRES 33800 - Environmental Field Skills Credits: 1.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- Additional Math or Statistics Selective - Credit Hours: 3.00
- Data Science Selective - Credit Hours: 3.00
- Environmental Policy and Analysis Concentration Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

17 Credits

Fall 3rd Year

- ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
- NRES 42000 - Environmental Internship Reporting Credits: 1.00
- POL 32700 - Global Green Politics Credits: 3.00 ♦
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦ or
- CHM 25700 - Organic Chemistry Credits: 4.00 ♦
- Elective - Credit Hours: 4.00-5.00

15 Credits

Spring 3rd Year

- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 ♦ or
- SOC 34400 - Environmental Sociology Credits: 3.00 ♦
- Ecology Selective - Credit Hours: 2.00-3.00
- Environmental Policy and Analysis Concentration Selective - Credit Hours: 3.00
- Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00-5.00

15-16 Credits

Fall 4th Year

- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00 ♦
- AGEC 52500 - Environmental Policy Analysis Credits: 3.00
  Science Communication Selective - Credit Hours: 3.00
- ASEC 38500 - Communication Strategies For Controversial Issues In ANR Credits: 3.00
- ASEC 48500 - Environmental Communication Credits: 3.00
- ASEC 58500 - Science Communication Credits: 3.00
- ENGL 42000 - Business Writing Credits: 3.00
- ENGL 42100 - Technical Writing Credits: 3.00
- ENTM 20100 - Scientific And Technical Communication Credits: 3.00
- NRES 48500 - Environmental Communications Credits: 3.00
- SFS 48500 - Environmental Communication Credits: 3.00
- Environmental Policy and Analysis Concentration Selective - Credit Hours: 3.00

12 Credits
Spring 4th Year

- ASEC 58500 - Science Communication Credits: 3.00
- NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00
- Environmental Policy and Analysis Concentration Selective - Credit Hours: 3.00
- Elective - Credit Hours: 4.00-5.00
- Elective - Credit Hours: 0.00-4.00

12-17 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.
Natural Resources and Environmental Science: Environmental Quality And Restoration Concentration, BS

About the Program

Natural Resources and Environmental Science (NRES) is an interdisciplinary program that combines broad environmental knowledge and technical competency, with understanding of the economic, policy and human factors of environmental management to develop graduates who are well-equipped to deal with the environmental challenges of the 21st century.

Students can choose from one of six concentration areas: energy and climate solutions, environmental policy and analysis, watershed management, environmental quality and restoration, sustainability science or emerging environmental challenges. NRES graduates work in an exciting variety of environmentally related careers in the public and private sector, including state and federal agencies, consulting firms and non-profits.

Students in the Environmental Quality and Restoration Concentration take courses in soil physics, plant biology, and hazardous waste handling, in addition to choosing 12 credits of course work in the evaluation, remediation, restoration, and preservation of air, water, and soil resources.

Natural Resources and Environmental Science Website

Natural Resources and Environmental Science Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (35 credits)

Required Major Courses (11 credits)

- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
- FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
- NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology & Society Selective for core)
- NRES 20000 - Introduction To Environmental Careers Credits: 1.00
- NRES 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 27000 - Forest Soils Credits: 3.00 ♦
- AGRY 33800 - Environmental Field Skills Credits: 1.00 or
- NRES 33800 - Environmental Field Skills Credits: 1.00
- NRES 42000 - Environmental Internship Reporting Credits: 1.00 (Capstone)
- NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00 (Capstone)
Environmental Quality And Restoration Concentration Courses (24 credits)

Required Concentration Courses (12 credits)

- AGRY 56000 - Soil Physics Credits: 3.00 ♦
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00 ♦
- NRES 38010 - Hazardous Waste Handling Credits: 3.00 ♦
- Additional Mathematics or Statistics Selective - Credit Hours: 3.00

Environmental Quality and Restoration Selective (12 credits)

- Environmental Quality and Restoration Selective - Credit Hours: 12.00

Other Departmental/Program Course Requirements (63-70 credits)

- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00 ♦
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
- ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core) or
- CHM 11500 - General Chemistry Credits: 4.00
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core) or
- CHM 11600 - General Chemistry Credits: 4.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦ or
- CHM 25700 - Organic Chemistry Credits: 4.00 ♦
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
- POL 22300 - Introduction To Environmental Policy Credits: 3.00 (satisfies College of Ag's Social Science Selective)
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 (satisfies College of Ag's 300+ Level of Social Science or Humanities Selective) ♦ or
- SOC 34400 - Environmental Sociology Credits: 3.00 ♦
  Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• Oral Communication Selective ♦ - Credit Hours: 3.00 (satisfies Oral Communication for core)
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
• Science Communication Selective - Credit Hours: 3.00
• ASEC 38500 - Communication Strategies For Controversial Issues In ANR Credits: 3.00
• ASEC 48500 - Environmental Communication Credits: 3.00
• ASEC 58500 - Science Communication Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00
• ENTM 20100 - Scientific And Technical Communication Credits: 3.00
• NRES 48500 - Environmental Communications Credits: 3.00
• SFS 48500 - Environmental Communication Credits: 3.00
• Written Communication Selective ♦ - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00
• ENGL 10800 - First Year Composition Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• Broadening Science Selective - Credit Hours: 1.00-3.00
• Data Science Selective - Credit Hours: 3.00
• Ecology Selective - Credit Hours: 2.00-3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Social Science Selective - Credit Hours: 3.00 - (any AGEC, ANTH, ECON, EDPS, POL, PSY, SOC course from the AG Humanities/Social Science list)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (15-22 credits)

• Electives - Credit Hours: 15.00-22.00

Supplemental Information

Selective courses: Natural Resources and Environmental Science Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

Transfer Credit Policy

• Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement
The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 ♦ or
- CHM 11500 - General Chemistry Credits: 4.00
- MA 16010 - Applied Calculus I Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
- FNR 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
- NRES 12500 - Environmental Science And Conservation Credits: 3.00
- Oral Communication - Credit Hours: 3.00
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
- COM 21700 - Science Writing And Presentation Credits: 3.00
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00

16-17 Credits

Spring 1st Year
- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00

Written Communication Selective - Credit Hours: 3.00-4.00
  - ENGL 10600 - First Year Composition With Conferences Credits: 4.00
  - ENGL 10800 - First Year Composition Credits: 3.00
  - HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
  - Elective - Credit Hours: 2.00-4.00

14-18 Credits

Fall 2nd Year

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- NRES 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 27000 - Forest Soils Credits: 3.00 ♦
- NRES 20000 - Introduction To Environmental Careers Credits: 1.00
- Broadening Selective - Credit Hours: 1.00-3.00
- Microeconomics Selective - Credit Hours: 3.00

12-14 Credits

Spring 2nd Year

- AGRY 33800 - Environmental Field Skills Credits: 1.00 ♦ or
- NRES 33800 - Environmental Field Skills Credits: 1.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- Additional Math of Statistics Selective - Credit Hours: 3.00
- Data Science Selective - Credit Hours: 3.00
- Environmental Quality and Restoration Concentration Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
17 Credits

Fall 3rd Year

- AGRY 56000 - Soil Physics Credits: 3.00
- NRES 42000 - Environmental Internship Reporting Credits: 1.00 - part of Capstone requirement
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 or
- CHM 25700 - Organic Chemistry Credits: 4.00
- ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
  Elective - Credit Hours: 4.00

14-15 Credits

Spring 3rd Year

- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 or
- SOC 34400 - Environmental Sociology Credits: 3.00
- Ecology Selective - Credit Hours: 2.00-3.00
- Elective - Credit Hours: 3.00-4.00
- Environmental Quality and Restoration Selective - Credit Hours: 3.00
- Social Science Selective - Credit Hours: 3.00

15 Credits

Fall 4th Year

- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00

- Elective - Credit Hours: 0.00-4.00
- Science Communication Selective - Credit Hours: 3.00
- Environmental Quality and Restoration Selective - Credit Hours: 3.00

12-16 Credits
Spring 4th Year

- NRES 38010 - Hazardous Waste Handling Credits: 3.00
- NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00
- Environmental Quality and Restoration Concentration Selectives - Credit Hours: 3.00
- Electives - Credit Hours: 4.00
- Electives - Credit Hours: 0.00-4.00

12-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Natural Resources and Environmental Science: Sustainability Science Concentration, BS

About the Program
Natural Resources and Environmental Science (NRES) is an interdisciplinary program that combines broad environmental knowledge and technical competency, with understanding of the economic, policy and human factors of environmental management to develop graduates who are well-equipped to deal with the environmental challenges of the 21st century.

Students can choose from one of six concentration areas: energy and climate solutions, environmental policy and analysis, watershed management, environmental quality and restoration, sustainability science or emerging environmental challenges. NRES graduates work in an exciting variety of environmentally related careers in the public and private sector, including state and federal agencies, consulting firms and non-profits.

Students in the Sustainability Science Concentration choose 21 credit hours of course work in sustainability, economics, and life cycle analysis to learn how to minimize the depletion of natural resources in agriculture, industry, and other sectors in order to balance environmental, social, and economic considerations.

Natural Resources and Environmental Science Website

Natural Resources and Environmental Science Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (35 credits)

Required Major Courses (11 credits)

- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
- FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
- NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology & Society Selective for core)
- AGRY 33800 - Environmental Field Skills Credits: 1.00 or
- NRES 33800 - Environmental Field Skills Credits: 1.00
- NRES 20000 - Introduction To Environmental Careers Credits: 1.00
- NRES 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 27000 - Forest Soils Credits: 3.00 ♦
- NRES 42000 - Environmental Internship Reporting Credits: 1.00 (Capstone)
- NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00 (Capstone)

Sustainability Science Concentration Courses (24 credits)

Required Concentration Courses (12 credits)

- EEE 23000 - Engineering Economics And Environment Credits: 3.00
• EEE 35500 - Engineering Environmental Sustainability Credits: 3.00 ♦
• MA 16020 - Applied Calculus II Credits: 3.00
• SFS 30200 - Principles Of Sustainability Credits: 3.00 ♦

Sustainability Science Concentration Selectives (12 credits)

• Sustainability Science Concentration Selective - Credit Hours: 12.00

Other Departmental/Program Course Requirements (66-71 credits)

• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00 ♦
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50 ♦
• ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core) or
• CHM 11500 - General Chemistry Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core) or
• CHM 11600 - General Chemistry Credits: 4.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦ or
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 ♦ or
• SOC 34400 - Environmental Sociology Credits: 3.00 ♦
• PHYS 22000 - General Physics Credits: 4.00 ♦
• PHYS 23300 - Physics For Life Sciences I Credits: 4.00
Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
Oral Communication Selective ♦ - Credit Hours: 3.00 (satisfies Oral Communication for core)
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
Science Communication Selective - Credit Hours: 3.00
• ASEC 38500 - Communication Strategies For Controversial Issues In ANR Credits: 3.00
• ASEC 48500 - Environmental Communication Credits: 3.00
• ASEC 58500 - Science Communication Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
- ENGL 42100 - Technical Writing Credits: 3.00
- ENTM 20100 - Scientific And Technical Communication Credits: 3.00
- NRES 48500 - Environmental Communications Credits: 3.00
- SFS 48500 - Environmental Communication Credits: 3.00

Written Communication Selective ♦ - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00
- ENGL 10800 - First Year Composition Credits: 3.00
- HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
- Data Science Selective - Credit Hours: 3.00
- Ecology Selective - Credit Hours: 2.00-3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Social Science Selective - Credit Hours: 3.00 (any AGEC, ANTH, ECON, EDPS, POL, PSY, SOC course from the AG HUM/SOCIAL SCI list)
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

**Electives (14-19 credits)**

- Electives - Credit Hours: 14.00-19.00

**Supplemental Information**

Selective courses: Natural Resources and Environmental Science Supplemental Information

**College of Agriculture & University Level Requirements**

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

**College of Agriculture Pass/No Pass Policy**

College of Agriculture Undergraduate Pass/No Pass Policy

**Transfer Credit Policy**

Transfer courses listed in the [Purdue Transfer Equivalency Guide](#) with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.
GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

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Transfer Credit Policy

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University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement
• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (3000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
• NRES 12500 - Environmental Science And Conservation Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 or
• CHM 11500 - General Chemistry Credits: 4.00
• MA 16010 - Applied Calculus I Credits: 3.00
   Oral Communication Selective ♦ - Credit Hours: 3.00
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

16-17 Credits

Spring 1st Year

• CHM 11200 - General Chemistry Credits: 3.00 or
• CHM 11600 - General Chemistry Credits: 4.00
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• MA 16020 - Applied Calculus II Credits: 3.00
   Written Communication Selective ♦ - Credit Hours: 3.00-4.00
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00
• ENGL 10800 - First Year Composition Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• Elective - Credit Hours: 3.00

15-17 Credits
Fall 2nd Year

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- NRES 20000 - Introduction To Environmental Careers Credits: 1.00
- NRES 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 25500 - Soil Science Credits: 3.00 ♦ or
- AGRY 27000 - Forest Soils Credits: 3.00 ♦
- PHYS 22000 - General Physics Credits: 4.00 ♦ or
- PHYS 23300 - Physics For Life Sciences I Credits: 4.00
- Microeconomics Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

- AGRY 33800 - Environmental Field Skills Credits: 1.00 ♦ or
- NRES 33800 - Environmental Field Skills Credits: 1.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
- SFS 30200 - Principles Of Sustainability Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Data Science Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

17 Credits

Fall 3rd Year

- NRES 42000 - Environmental Internship Reporting Credits: 1.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦ or
- CHM 25700 - Organic Chemistry Credits: 4.00 ♦
- EEE 23000 - Engineering Economics And Environment Credits: 3.00
- ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
- Elective - Credit Hours: 3.00

13-14 Credits

Spring 3rd Year

- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 ♦ or
• SOC 34400 - Environmental Sociology Credits: 3.00
• Ecology Selective - Credit Hours: 2.00-3.00
• Social Science Selective: Credit Hours: 3.00
• Elective - Credit Hours: 3.00

14-15 Credits

Fall 4th Year

• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00 ♦
• Science Communication Selective - Credit Hours: 3.00
• Sustainability Science Concentration Selective - Credit Hours: 3.00
• Sustainability Science Concentration Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00

13 Credits

Spring 4th Year

• NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00
• Sustainability Science Concentration Selective - Credit Hours: 3.00
• Sustainability Science Concentration Selective - Credit Hours: 3.00
• Elective - Credit Hours: 4.00-9.00

12-17 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS-Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to
persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Natural Resources and Environmental Science: Watershed Management Concentration, BS

About the Program

Natural Resources and Environmental Science (NRES) is an interdisciplinary program that combines broad environmental knowledge and technical competency, with understanding of the economic, policy and human factors of environmental management to develop graduates who are well-equipped to deal with the environmental challenges of the 21st century.

Students can choose from one of six concentration areas: energy and climate solutions, environmental policy and analysis, watershed management, environmental quality and restoration, sustainability science or emerging environmental challenges. NRES graduates work in an exciting variety of environmentally related careers in the public and private sector, including state and federal agencies, consulting firms and non-profits.

Students in the Watershed Management Concentration choose 21 credit hours of course work in community involvement, hydrology, and soil conservation in order to engage and educate stakeholders to implement land use and water management practices to protect and improve water quality and natural resources.

Natural Resources and Environmental Science Website

Natural Resources and Environmental Science Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (35 credits)

Required Major Courses (11 credits)
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
• NRES 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology & Society Selective for core)
• NRES 20000 - Introduction To Environmental Careers Credits: 1.00
• AGRY 33800 - Environmental Field Skills Credits: 1.00 or
• NRES 33800 - Environmental Field Skills Credits: 1.00
• NRES 25500 - Soil Science Credits: 3.00 ♦ or
• AGRY 25500 - Soil Science Credits: 3.00 ♦ or
• AGRY 27000 - Forest Soils Credits: 3.00 ♦
• NRES 42000 - Environmental Internship Reporting Credits: 1.00 (Capstone)
• NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00 (Capstone)

Watershed Management Concentration Courses (24 credits)

Required Concentration Courses (12 credits)

• AGRY 33700 - Environmental Hydrology Credits: 3.00 ♦ or
• NRES 33700 - Environmental Hydrology Credits: 3.00
• AGRY 45000 - Soil Conservation and Water Management Credits: 3.00 ♦
• FNR 27000 - Landscape-Level Planning Credits: 1.00 ♦ or
• NRES 27000 - Landscape-Level Planning Credits: 1.00 ♦
• NRES 57200 - Stakeholder Involvement In Landscape Management Credits: 2.00 or
• HORT 57200 - Stakeholder Involvement In Landscape Management Credits: 2.00
• Additional Mathematics or Statistics Selective - Credit Hours: 3.00

Watershed Management Selective (12 credits)

• Watershed Management Selective - Credit Hours: 12.00

Other Departmental/Program Course Requirements (63-70 credits)
• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
• ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
• BTRY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
• BTRY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core) or
• CHM 11500 - General Chemistry Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core) or
• CHM 11600 - General Chemistry Credits: 4.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦ or
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 satisfies College of Ag's 300+ Level of Social Science or Humanities Selective ♦ or
• SOC 34400 - Environmental Sociology Credits: 3.00 satisfies College of Ag's 300+ Level of Social Science or Humanities Selective ♦
  Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
  Oral Communication Selective ♦ - Credit Hours: 3.00 (satisfies Oral Communication for core)
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
  Science Communication Selective - Credit Hours: 3.00
• ASEC 38500 - Communication Strategies For Controversial Issues In ANR Credits: 3.00
• ASEC 48500 - Environmental Communication Credits: 3.00
• ASEC 58500 - Science Communication Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00
• ENTM 20100 - Scientific And Technical Communication Credits: 3.00
• NRES 48500 - Environmental Communications Credits: 3.00
• SFS 48500 - Environmental Communication Credits: 3.00
  Written Communication Selective ♦ - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00
• ENGL 10800 - First Year Composition Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• Broadening Science Selective - Credit Hours: 1.00-3.00
- Data Science Selective - Credit Hours: 3.00
- Ecology Selective - Credit Hours: 2.00-3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Social Science Selective - Credit Hours: 3.00 (any AGEC, ANTH, ECON, EDPS, POL, PSY, SOC course from the AG HUM/SOCIAL SCI list)
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (15-22 credits)

- Electives - Credit Hours: 15.00-22.00

Supplemental List

- Natural Resources and Environmental Science Supplemental Information

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.
Transfer Credit Policy

- Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12200 - Introduction To Natural Resources And Environmental Science Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 ♦ or
• CHM 11500 - General Chemistry Credits: 4.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 or
• NRES 12500 - Environmental Science And Conservation Credits: 3.00
  Oral Communication Selective ♦ - Credit Hours: 3.00
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

16-17 Credits

Spring 1st Year

• CHM 11200 - General Chemistry Credits: 3.00 ♦ or
• CHM 11600 - General Chemistry Credits: 4.00
  Written Communication Selective ♦ - Credit Hours: 3.00-4.00
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00
• ENGL 10800 - First Year Composition Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• Elective - Credit Hours: 2.00

14-16 Credits

Fall 2nd Year

• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
• NRES 20000 - Introduction To Environmental Careers Credits: 1.00
• NRES 25500 - Soil Science Credits: 3.00 ♦ or
• AGRY 25500 - Soil Science Credits: 3.00 ♦ or
• AGRY 27000 - Forest Soils Credits: 3.00 ♦
• Broadening Selective - Credit Hours: 1.00-3.00
• Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)

12-14 Credits

Spring 2nd Year
• AGRY 33800 - Environmental Field Skills Credits: 1.00 or
• NRES 33800 - Environmental Field Skills Credits: 1.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
• Watershed Management Concentration Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
• Additional Math of Statistics Selective - Credit Hours: 3.00
• Data Science Selective - Credit Hours: 3.00

17 Credits

Fall 3rd Year

• AGRY 45000 - Soil Conservation and Water Management Credits: 3.00 ♦
• ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
• NRES 42000 - Environmental Internship Reporting Credits: 1.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦ or
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• Elective - Credit Hours: 4.00

14-15 Credits

Spring 3rd Year

• AGRY 33700 - Environmental Hydrology Credits: 3.00 or
• NRES 33700 - Environmental Hydrology Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 ♦ or
• SOC 34400 - Environmental Sociology Credits: 3.00 (satisfies College of Ag's 300+ Level of Social Science or Humanities Selective) ♦
• Ecology Selective - Credit Hours: 2.00-3.00
• Elective - Credit Hours: 4.00
• Social Science Selective - Credit Hours: 3.00

15-16 Credits

Fall 4th Year
• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00 ♦
• FNR 27000 - Landscape-Level Planning Credits: 1.00 or
• NRES 27000 - Landscape-Level Planning Credits: 1.00
• NRES 57200 - Stakeholder Involvement In Landscape Management Credits: 2.00 or
• HORT 57200 - Stakeholder Involvement In Landscape Management Credits: 2.00

• Science Communication Selective - Credit Hours: 3.00
• Watershed Management Concentration Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00-3.00

13-15 Credits

Spring 4th Year

• NRES 49700 - Current Topics In Environmental Sciences Credits: 2.00
• Watershed Management Concentration Selective - Credit Hours: 3.00
• Watershed Management Concentration Selective - Credit Hours: 3.00
• Elective - Credit Hours: 4.00-9.00

12-17 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be
proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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Certificate

Deans Scholar Certificate

Requirements for the Certificate

- AGR 20500 - Dean's Scholars Seminar Credits: 1.00
- Honors Coursework - (12 credit hours) Honors Courses
- Undergraduate research (thesis) or Scholarly Project - engagement in a sustained project or creative project leading to new knowledge

Selection Criteria

- All students who enter Purdue University College of Agriculture as recipients of the Board of Trustees Scholarship are encouraged to apply to the Dean's Scholars Program as are others fulfilling the following criteria:
  - 3.8/4.0 High School GPA and 1800 SAT/ACT 27 and above OR Valedictorian of high school
- First semester students will be asked to accept a Dean's Scholar status by May 15 and must accept the invitation prior to fall semester.
- Second semester freshmen, sophomores, and transfer students with 60 credits remaining at Purdue may apply if they have a GPA equal to or greater than 3.5. A written essay stating why the student is interested in being a Dean's Scholar is part of the formal application process. Review of applications will be administered by the Office of Academic Programs and the Departmental Honors Coordinator from the department in which the student is enrolled. Prospective Students Information

Notes

- For more information, please visit the Dean's Scholars Website
- Undergraduate Research: UG Research Website AND UG Honors Research Website
- Scholarly (Creative) Projects
- Scholarly/creative project definitions (not proposal/completion process information unless also completing project for Honors College)
- GPA requirement to earn Dean's Scholars distinction at graduation is 3.25 or above.
Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Leadership Development Program Certificate

About the Program

Everyone has leadership potential. Let Leadership Development Program Certificate help you tap yours!

In LDCP you will gain leadership experience tailored to you and your situation, enjoy one-on-one coaching, and develop the "soft skills" employers today are looking for. And when you complete LDCP and earn your certificate, it will appear on your academic transcript.

Purpose, Goals and Objectives

Purpose:

- The purpose of the Agriculture Leadership and Professional Development Program is to support the professional and leadership development and career readiness of students across the College of Agriculture.

Goals:

- The primary goal of the program is broader engagement in co-curricular activities in the College of Agriculture and beyond, leading to more, better prepared graduates ready to enjoy professional and personal success.

Objectives:

- Understand competencies that employers believe are important to career and personal success
- Provide a framework for guiding students' engagement in co-curricular activities to ensure a broad foundation in these competencies
- Build professional habits such as reflection and self-study to support a life-long learning mindset
- Ensure students have the ability to articulate how engagement in the program has supported their professional and personal growth.
Competencies

Adapted from NACE: National Association of Colleges and Employers

- **Career and Self Development:** Proactively develop oneself and one's career through continual personal and professional learning, awareness of one's strengths and weaknesses, navigation of career opportunities, and networking to build relationships within and without one's organization.
- **Communication:** Clearly and effectively exchange information, ideas, facts, and perspectives with persons inside and outside of an organization.
- **Critical Thinking:** Identify and respond to needs based upon an understanding of situational context and logical analysis of relevant information.
- **Equity and Inclusion:** Demonstrate the awareness, attitude, knowledge, and skills required to equitably engage and include people from different local and global cultures.
- **Leadership:** Recognize and capitalize on personal and team strengths to achieve organizational goals.
- **Professionalism:** Knowing work environments differ greatly, understand, and demonstrate effective work habits, and act in the interest of the larger community and workplace.
- **Teamwork:** Build and maintain collaborative relationships to work effectively toward common goals, while appreciating diverse viewpoints and shared responsibilities.
- **Technology:** Understand and leverage technologies ethically to enhance efficiencies, complete tasks, and accomplish goals.

*Listed in alphabetical order

Requirements for the Certificate

1. 1 credit, asynchronous online class
2. Students are required to complete a minimum of 10 activities and reflections. Students will write a reflection for each activity focusing on what they learned and which competency(ies) the activity supported. The full list of NACE competencies can be found below.
3. Students must complete at least one activity in all eight of the NACE competencies. The other two activities can be in repeat competencies.
4. The final reflection must review the student's engagement in the certificate program activities and state how the student plans to explain the value/key learnings from the certificate experience to an employer or graduate/professional school.
5. Previous activities completed within the last 12 months can be accepted for students who join the program later. A maximum of three reflections can come from past activities.
6. Examples of common experiences include:
   - Meeting with a mentor at least 2x/academic year (industry or on-campus). Mentors should be aligned with the student's post-graduate plans.
   - Internship (worth 2)
   - Club officer
   - Conference participation
   - Teaching assistant/peer mentor (worth 2)
   - College committee member
   - Workplace tour
   - Part-time job relevant to field of study (worth 2)
   - Issues 360 Institute
   - Study abroad (full semester worth 2)
   - Service projects
   - Participation in an OMP events (Support for Success, LeaderShape, MLK week)
   - Classes approved by program administrator
     - Students complete leadership contract for courses (similar to an honors contract). Students submit form to program manager stating why they believe this course follows the objectives of the program. Course is then approved or denied and a list of approved classes is maintained online.
- QPR Training
- LEAP Workshops
- Attending lectures by guest speakers
- Research experience

- AGR 29000 - Special Topics in Agriculture Credits: 0.00 to 3.00 - must take 1 credit

Student Qualifications

- At least three semesters remaining at Purdue
- Not a first semester student
- For transfer and Ag Pathway students, at least 12 credits earned at a 2 or 4-year institution
- Currently pursuing an undergraduate degree in the College of Agriculture

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Minor

Data Driven Agriculture Minor

About the Program

The data revolution in agriculture is enabled by advances in sensing, communication, and computation technologies and spurred by demand for improved sustainability and transparency in areas such as natural resources use and food safety. Cheaper and more portable sensors generate measurements at previously unimagined spatial and temporal resolutions. As these new data products are becoming available, other data such as publicly available soil, topography, and weather information is also flowing more readily via improved connections. Agricultural professionals will be increasingly using these data in both research and in production, processing, and marketing. With increased intensity, volume, and applications, industry is expecting programming and data skills. The Purdue Data Driven Agriculture minor builds these proficiencies and efficiently packages content related to the data pipeline and data science analytics with a culmination in data-driven decision making. The minor includes courses that map to these skill sets:

- A foundation in mathematics and statistics
- Data acquisition and sensors
- Data literacy, ethics, management, and analytics
- Knowledge of how data is used in agricultural disciplines
- Data architecture and usage, including geographic information systems (GIS)
- Data-driven decision making

Requirements for the Minor (21 credits)
Required Course (3 credits)

- AGR 33300 - Data Science For Agriculture Credits: 3.00

Foundation in Computation - Choose One (3 credits)

- ABE 20500 - Computations For Engineering Systems Credits: 3.00 *
- ABE 30100 - Modeling And Computational Tools In Biological Engineering Credits: 3.00 *
- ASM 10500 - Computing Technology With Applications Credits: 3.00 *
- CNIT 10500 - Introduction To C Programming Credits: 3.00
- CNIT 13600 - Personal Computing Technology And Applications Credits: 3.00
- CNIT 17600 - Information Technology Architectures Credits: 3.00
- CS 10100 - Digital Literacy Credits: 3.00
- CS 15900 - C Programming Credits: 3.00
- CS 17700 - Programming With Multimedia Objects Credits: 4.00
- CS 18000 - Problem Solving And Object-Oriented Programming Credits: 4.00
- CS 23500 - Introduction To Organizational Computing Credits: 3.00
- ECE 26400 - Advanced C Programming Credits: 3.00
- ECE 36800 - Data Structures Credits: 3.00
- ECE 46900 - Operating Systems Engineering Credits: 4.00
- IE 33200 - Computing In Industrial Engineering Credits: 3.00
- MGMT 28800 - Programming For Business Applications Credits: 3.00

Foundation in Data Literacy, Management and Analytics - Choose One (3 credits)

- AGRY 42000 - Computing For The Natural Sciences Credits: 3.00
- ASM 53200 - Introduction To Agricultural Informatics Credits: 3.00
- BCHM 42100 - R For Molecular Biosciences Credits: 3.00 *
- CNIT 48800 - Data Warehousing Credits: 3.00
- CNIT 57000 - IT Data Analytics Credits: 3.00
- CS 24200 - Introduction To Data Science Credits: 3.00
- CS 25100 - Data Structures And Algorithms Credits: 3.00
- ECE 29595 - Selected Topics In Electrical And Computer Engineering Credits: 1.00 to 5.00
- ECE 30010 - Introduction To Machine Learning And Pattern Recognition Credits: 3.00
- ECE 47300 - Introduction To Artificial Intelligence Credits: 3.00
- ENTM 24200 - Data Science Credits: 3.00 *
- ILS 59500 - Special Topics In Electrical And Computer Engineering Credits: 1.00 to 4.00
- MGMT 38200 - Management Information Systems Credits: 3.00
- MGMT 54400 - Database Management Systems Credits: 3.00
- PHIL 20700 - Ethics For Technology, Engineering, And Design Credits: 3.00
- SCLA 59000 - Special Topics Credits: 3.00
- STAT 24200 - Introduction To Data Science Credits: 3.00
- TDM 10100 - The Data Mine Seminar I Credits: 1.00
- TDM 10200 - The Data Mine Seminar II Credits: 1.00
- TDM 20100 - The Data Mine Seminar III Credits: 1.00
• TDM 20200 - The Data Mine Seminar IV Credits: 1.00
• TDM 30100 - The Data Mine Seminar V Credits: 1.00
• TDM 30200 - The Data Mine Seminar VI Credits: 1.00
• TDM 40100 - The Data Mine Seminar VII Credits: 1.00
• TDM 40200 - The Data Mine Seminar VIII Credits: 1.00

Foundation in Statistical Methods - Choose One (3 credits)

• AAE 36100 - Introduction To Random Variables In Engineering Credits: 3.00
• BIOL 39500 - Special Assignments Credits: 0.00 to 18.00
• BIOL 58210 - Ecological Statistics Credits: 3.00
• BIOL 59500 - Special Assignments Credits: 0.00 to 18.00
• CHE 32000 - Statistical Modeling And Quality Enhancement Credits: 3.00
• EAPS 31000 - Introductory Statistics For Geosciences Credits: 3.00
• ECE 20875 - Python For Data Science Credits: 3.00
• ECE 30200 - Probabilistic Methods In Electrical And Computer Engineering Credits: 3.00
• ECON 36000 - Econometrics Credits: 3.00
• EDPS 55600 - Introduction To Quantitative Data Analysis Methods In Education I Credits: 3.00
• EDPS 55700 - Introduction To Quantitative Data Analysis Methods In Education II Credits: 3.00
• IDE 36000 - Multidisciplinary Engineering Statistics Credits: 3.00
• IE 33000 - Probability And Statistics In Engineering II Credits: 3.00
• MGMT 30500 - Business Statistics Credits: 3.00
• MGMT 30600 - Management Science Credits: 3.00
• PSY 20100 - Introduction To Statistics In Psychology Credits: 3.00
• STAT 22500 - Introduction To Probability Models Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• STAT 35000 - Introduction To Statistics Credits: 3.00
• STAT 35500 - Statistics For Data Science Credits: 3.00
• STAT 50100 - Experimental Statistics I Credits: 3.00
• STAT 50300 - Statistical Methods For Biology Credits: 3.00
• STAT 51100 - Statistical Methods Credits: 3.00

Data Acquisition - Choose One: (3 credits)

• ABE 31400 - Design Of Electronic Systems Credits: 3.00 *
• ABE 46000 - Sensors And Process Control Credits: 3.00 *
• ABE 53100 - Instrumentation And Data Acquisition Credits: 3.00 *
• AGRY 54500 - Remote Sensing Of Land Resources Credits: 3.00 *
• ASM 42000 - Electric Power And Controls Credits: 3.00 *
• ECE 57700 - Engineering Aspects Of Remote Sensing Credits: 3.00
• ECET 35901 - Computer Based Data Acquisition Applications Credits: 3.00
• EDPS 53100 - Introduction To Measurement And Instrument Design Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00 *
• ME 36500 - Measurement And Control Systems | Credits: 3.00

Data Architecture and Usage - Choose One: (3 credits)

• ABE 20500 - Computations For Engineering Systems | Credits: 3.00 *
• ABE 30100 - Modeling And Computational Tools In Biological Engineering | Credits: 3.00 *
• AGEC 20201 - Introduction To Data Analytics For Agricultural Business | Credits: 3.00 *
• AGEC 45100 - Applied Econometrics | Credits: 3.00
• ASM 53200 - Introduction To Agricultural Informatics | Credits: 3.00 *
• ASM 54000 - Geographic Information System Application | Credits: 3.00 *
• BCHM 42200 - Computational Genomics | Credits: 3.00 *
• BCHM 52100 - Comparative Genomics | Credits: 3.00 *
• CNIT 37200 - Database Programming | Credits: 3.00
• CNIT 39200 - Enterprise Data Management | Credits: 3.00
• FNR 55800 - Remote Sensing Analysis And Applications | Credits: 3.00 *
• MGMT 40300 - Database Management Systems | Credits: 3.00
• MGMT 47300 - Data Mining | Credits: 3.00
• FNR 35910 - Spatial Ecology | Credits: 2.00 * and
• FNR 35950 - Spatial Ecology Laboratory | Credits: 1.00 *

Data to Decisions* - Choose One: (3 credits)

• ABE 52700 - Computer Models In Environmental And Natural Resources Engineering | Credits: 3.00
• AGEC 30500 - Agricultural Prices | Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making | Credits: 3.00
• AGEC 45100 - Applied Econometrics | Credits: 3.00
• AGEC 50600 - Agricultural Marketing And Price Analysis | Credits: 3.00
• AGEC 51600 - Mathematical Tools For Agricultural And Applied Economics | Credits: 3.00
• AGEC 55200 - Introduction To Mathematical Programming | Credits: 3.00
• AGRY 44400 - Weather Analysis And Forecasting | Credits: 3.00
• AGRY 48500 - Precision Crop Management | Credits: 3.00
• ANSC 31100 - Animal Breeding And Genetics | Credits: 4.00
• ASEC 58200 - Introduction To The Application Of Inferential Statistics | Credits: 3.00
• ASM 42200 - Advanced Machine Technology For Agricultural Crop Production | Credits: 3.00
• ASM 53000 - Power And Machinery Management | Credits: 3.00
• BCHM 42100 - R For Molecular Biosciences | Credits: 3.00
• BCHM 52100 - Comparative Genomics | Credits: 3.00
• BTNY 53500 - Plant Disease Epidemiology | Credits: 3.00
• ENTM 22820 - Forensic Analysis | Credits: 4.00
• ENTM 30100 - Experimentation And Analysis | Credits: 3.00
• FNR 35500 - Quantitative Methods For Resource Management | Credits: 3.00
• FNR 55800 - Remote Sensing Analysis And Applications | Credits: 3.00
• HORT 31900 - Controlled Environment Production Of Horticultural Crops | Credits: 3.00
• HORT 53100 - Applied Plant Genomics | Credits: 2.00

Notes
• *Agriculture Courses - At least 9 credits applied to the minor must come from the College of Agriculture
• Courses appearing in more than one category may only be used once toward the minor.
• Many courses have prerequisites and capacity limits; while these provide some constraints, there are paths for students from any major to obtain this minor.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

International Studies in Agriculture Minor

About the Program

The Purdue University College of Agriculture offers an International Studies in Agriculture minor to all Purdue undergraduate students who wish to develop international competencies beyond the minimum international understanding course requirements. The International Studies of Agriculture minor is an academic minor administered by the Purdue College of Agriculture Office of Academic Programs (OAP), in partnership with International Programs in Agriculture (IPIA).

Goals for the minor include:

1. Increase the student's understanding of international agriculture (including, but not limited to food, water, energy, economics, environment, natural resources, health, plants, animals, forestry, and wildlife);
2. Prepare students for international facets of their careers and lives through experiences on and off campus;
3. Integrate the development of cultural awareness into all on-campus, co-curricular, and study abroad student experiences; and
4. Increase the relevance and attraction of students seeking this minor.

This minor directly addresses the College of Agriculture Strategic Plan (2021-2026)

We are 'global' in our identity.

• Teaching: Prepare students for tomorrow's world with breadth and depth
• Engagement: Focused international engagement with partnerships
• Research: Global recognition for driving discovery towards solutions to challenges

Learning Outcomes

Students who complete the International Studies in Agriculture Minor will be able to:
1. demonstrate critical thinking and analytical skills through successful completion of a project with an international dimension in agriculture
2. demonstrate effective cross-cultural international communication, both orally and in written form, about an international topic
3. demonstrate the ability to be a global citizen in international and multicultural, locations and groups
4. understand the global importance and impact of agriculture
5. communicate an appreciation of and respect for cultural diversity, and being able to think critically about the impact that their own cultural identities have on their worldview

Requirements for the Minor (15-27 credits)

Requirements - Complete Five (5) Learning Outcomes:

Learning outcomes are not all credit based. All five learning outcomes must be met to complete the minor.

Learning Outcome 1 - Projects

Option 1: Research Project

- Completion of undergraduate research project with an integrated international component, where the international dimension is critical to successfully completing the project, and the project is related to agriculture.

Option 2: Capstone Project

- Completion of a capstone project with an integrated international component, where the international dimension is critical to successfully completing the project, and the project is related to agriculture.

Option 3: International Agriculture Project

- Completion of a project, related to agriculture and with an international partner, either for-credit or extracurricular, where the project has a faculty advisor, defined scope and objectives, and demonstrable outcomes. Examples include, but are not limited to, Purdue international service-learning projects, EPICS international projects, Purdue Utility Project (PUP), Purdue Youthsmapers, and internships that meet the requirements. OAP and IPIA will assist students in finding suitable projects, and with evaluating projects proposed directly by students.

Learning Outcome 2 - World Language

Option 1 - World Language Aptitude

Option 1a - World Language Advanced Coursework (12 credits)

- Coursework through the 4th semester, or 12 credits, of a second language

Option 1b - Study Abroad Course taught in Foreign Language

- Successful completion of at least one class taught in a foreign language during a semester abroad.
Option 1c - World Language Proficiency Exam

- Successful completion of a recognized language proficiency exam, external to Purdue.

Option 2 - Intercultural Development Inventory (IDI)

- Completion of Intercultural Development Inventory (IDI), a debrief with a Qualified Administrator, completion of an Intercultural Development Plan (IDP), and a second IDI and debrief following completion of at least one other learning outcome. (Other intercultural assessment tools may be considered if they can demonstrate achievement of the learning outcome and are validated, reliable, and include a written and oral component (i.e. the debrief and development plan for the IDI).

Learning Outcome 3 - International Engagement

Option 1 - Study Abroad Experience

- Study abroad experience (minimum of 8 weeks of international experience, can be the sum of multiple experiences)

Option 2 - Campus Engagement with International Group

- Engagement with an international group on campus that leads to demonstrable and intentional development of the desire to, and recognition of the importance of being a global citizen. Students wishing to utilize this assessment are required to submit a written summary describing their understanding of what it means to be a global citizen and what impact their interactions with the international group had on their development in this area.

Learning Outcome 4 - International Agriculture Courses (15 credits)

- Completion of 15 semester credits of courses related to international agriculture. Courses offered by the College of Agriculture that meet the International Understanding requirement, and courses relating to agriculture and taken at the host university during a study abroad satisfy this requirement.

Learning Outcome 5 - Reflective Paper/Video

- A reflective summary paper or recorded video illustrating an appreciation of and respect for cultural diversity, and how their own cultural identities impact their worldview of food and agriculture. Recommended to be completed their final semester and integrating the assessments from previous learning outcomes.

Course Examples:

Examples of College of Agriculture International-related Courses

- AGEC 25000 - Economic Geography Of World Food And Resources Credits: 3.00
- AGEC 34000 - International Economic Development Credits: 3.00
- AGEC 40000 - Agricultural Economics Study Abroad Credits: 0.00 to 8.00
- AGEC 45000 - International Agricultural Trade Credits: 3.00
- AGEC 49800 - Special Problems Credits: 1.00 to 3.00 - Title: Afghanistan Development Challenges
- AGEC 52600 - International Food And Agribusiness Marketing Strategy Credits: 3.00
- AGEC 59600 - Seminars In Current Issues In Agricultural Economics Credits: 1.00 to 3.00
- AGR 40000 - Agriculture Study Abroad Credits: 0.00 to 8.00
- AGR 49300 - Special Topics In International Agriculture Credits: 0.00 to 3.00
- AGR 49500 - International Professional Experience In Agriculture, Food, Or Natural Resources Credits: 0.00
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- AGRY 35000 - Global Awareness Credits: 1.00 to 3.00
- AGRY 39900 - Individual Study Credits: 1.00 to 3.00 - Title: Afghanistan Development Challenges
- AGRY 40000 - Agronomy Study Abroad Credits: 0.00 to 8.00
- AGRY 59800 - Special Problems Credits: 1.00 to 6.00 Titles: Global Food Problems or African Development Challenges
- ANSC 29400 - Exploring International Animal Agriculture Credits: 3.00
- ANSC 29500 - Special Topics In Animal Sciences Credits: 0.00 to 3.00
- ANSC 33100 - The Role Of Horses In Human History, Culture, And Society Credits: 3.00
- ANSC 40000 - Animal Sciences Study Abroad Credits: 0.00 to 8.00
- ASEC 43100 - Planning For International Engagement Methods Credits: 1.00
- ASEC 43120 - Evaluating International Engagement Methods Credits: 1.00
- ASEC 55100 - International Engagement And Development Strategies Credits: 3.00
- ASM 40000 - Agricultural Systems Management Study Abroad Credits: 0.00 to 8.00
- BCHM 40000 - Biochemistry Study Abroad Credits: 0.00 to 8.00
- BTNY 28500 - Plants And Civilization Credits: 3.00
- BTNY 39000 - Selected Topics In Plant Science Credits: 1.00 to 3.00
- BTNY 40000 - Botany And Plant Pathology Study Abroad Credits: 0.00 to 8.00
- ENTM 40000 - Entomology Study Abroad Credits: 0.00 to 8.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 30200 - Global Sustainability Issues Credits: 2.00
- FNR 40000 - Forestry And Natural Resources Study Abroad Credits: 0.00 to 8.00
- FNR 46000 - International Natural Resources Summer Program Credits: 3.00
- FS 40000 - Food Science Study Abroad Credits: 0.00 to 8.00
- FS 47000 - Wine Appreciation Credits: 3.00
- HORT 40000 - Horticulture Study Abroad Credits: 0.00 to 8.00
- HORT 40300 - Tropical Horticulture Credits: 3.00
- HORT 45000 - In The English Landscape: Integrating History, Horticulture, And Landscape Architecture Credits: 3.00
- LA 16600 - History And Theory Of Landscape Architecture Credits: 3.00
- LA 40000 - Landscape Architecture Study Abroad Credits: 0.00 to 8.00
- LA 45000 - In The English Landscape: Integrating History, Horticulture, and Landscape Architecture Credits: 3.00
- NRES 40000 - Natural Resources And Environmental Science Study Abroad Credits: 0.00 to 8.00

Examples of courses from outside of the College of Agriculture

- ECON 37000 - International Trade Credits: 3.00
- POL 13000 - Introduction To International Relations Credits: 3.00

Notes
• Credits earned via a Purdue approved Study Abroad Program can be used as long as they fulfill the basic requirements listed above. Namely, focus on the country/region, etc.
• Departmental permission is required to enroll in this minor. Please contact Tim Kerr in Room 121 of the Agricultural Administration Building.
• Students must have their Plan of Study approved a minimum of six months prior to graduation. Final approval will require approval of the stated deliverables by the College of Agriculture Office of Academic Programs three weeks before the end of the graduating semester.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Natural Resources and Environmental Science Minor

Requirements for the Minor (15 credits)

Required Course (3 credits)

- AGRY 12500 - Environmental Science And Conservation Credits: 3.00
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00
- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- NRES 12500 - Environmental Science And Conservation Credits: 3.00

Selective Course - Choose One: (3 credits)

- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
- NRES 25500 - Soil Science Credits: 3.00
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- SOC 34400 - Environmental Sociology Credits: 3.00

Emphasis Areas Selectives (9 credits)

Select one course from three different areas.

Climate and Energy Emphasis
- EAPS 22100 - Survey Of Atmospheric Science Credits: 3.00
- NRES 23000 - Survey Of Meteorology Credits: 3.00
- POL 32700 - Global Green Politics Credits: 3.00

Environmental Policy and Analysis Emphasis

- AGEC 52500 - Environmental Policy Analysis Credits: 3.00
- ASEC 58500 - Science Communication Credits: 3.00
- POL 32700 - Global Green Politics Credits: 3.00

Environmental Quality and Restoration Emphasis

- AGRY 56000 - Soil Physics Credits: 3.00
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
- NRES 38010 - Hazardous Waste Handling Credits: 3.00

Sustainability Science Emphasis

- EEE 23000 - Engineering Economics And Environment Credits: 3.00
- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- SFS 30200 - Principles Of Sustainability Credits: 3.00

Watershed Management Emphasis

- AGRY 33700 - Environmental Hydrology Credits: 3.00 or
- NRES 33700 - Environmental Hydrology Credits: 3.00
- HORT 57200 - Stakeholder Involvement In Landscape Management Credits: 2.00 or
- NRES 57200 - Stakeholder Involvement In Landscape Management Credits: 2.00 and
- FNR 27000 - Landscape-Level Planning Credits: 1.00
- AGRY 45000 - Soil Conservation and Water Management Credits: 3.00 or
- NRES 45000 - Soil Conservation And Water Management Credits: 3.00

Note

- Department permission is not required to enroll in this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Non-Degree

College of Agriculture Additional Written or Oral Communication Selectives

Written or Oral Communication Selectives

- ASL 10000-59999 (ASL 10000 level courses are accepted)
- COM 20000-59999
- ENGL 20000-59999
- AGR 20100 - Communicating Across Culture Credits: 3.00
- ASEC 28500 - Introduction To Publication Design Credits: 3.00
- ASEC 44000 - Methods Of Teaching Agricultural Education Credits: 3.00
- ASEC 48500 - Environmental Communication Credits: 3.00
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
- EDPS 31600 - Collaborative Leadership: Cross-Cultural Settings Credits: 3.00
- ENTM 20100 - Scientific And Technical Communication Credits: 3.00
- NRES 48500 - Environmental Communications Credits: 3.00
- SFS 48500 - Environmental Communication Credits: 3.00

College of Agriculture Humanities or Social Science Selectives

Use Any Selective Area to fulfill this requirement

Agriculture Humanities or Social Sciences Selective

- AAS 10000-59999 - African American Studies
- AD 10000-59999 - Art and Design
- AMST 10000-59999 - American Studies
- ANTH 10000-59999 - Anthropology
- ARAB 10000-59999 - Arabic
- ASAM - 10000-59999 - Asian American Studies
- ASL - 10000-59999 - American Sign Language
- BAND 10000-59999 - Bands (Maximum of 3 credits can be used for Humanities)
- CHNS 10000-59999 - Chinese
- CLCS 10000-59999 - Classics
- CMPL 10000-59999 - Comparative Literature
- DANC 10000-59999 - Dance
- ECON 10000-59999 - Economics
- FR 10000-59999 - French
• FVS 10000-59999  - Film and Video Studies
• GER 10000-59999  - German
• GREK 10000-59999  - Greek
• HEBR 10000-59999  - Hebrew
• HIST 10000-59999  - History
• IDIS 10000-59999  - Interdisciplinary Studies
• ITAL 10000-59999  - Italian
• JPNS 10000-59999  - Japanese
• JWST 10000-59999  - Jewish Studies
• KOR 10000:59999 - Korean
• LALS 10000-59999  - Latin American and Latino Studies
• LATN 10000-59999 - Latin
• LC 10000-59999 - Languages and Cultures
• LING 10000-59999  - Linguistics
• MARS 10000-59999  - Medieval and Renaissance Studies
• MUS 10000-59999  - Music
• PHIL 10000-59999  - Philosophy
• POL 10000-59999  - Political Science
• PSY 10000-59999 - Psychological Sciences
• PTGS 10000-59999 - Portuguese
• REL 10000-59999 - Religious Studies
• RUSS 10000-59999 - Russian
• SOC 10000-59999 - Sociology
• SPAN 10000-59999 - Spanish
• THTR 10000-59999 - Theatre
• WGSS 10000-59999 - Women's, Gender, And Sexuality Studies
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• AGEC 25000 - Economic Geography Of World Food And Resources Credits: 3.00
• AGEC 30500 - Agricultural Prices Credits: 3.00
• AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
• AGEC 34000 - International Economic Development Credits: 3.00
• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
• AGEC 41000 - Agricultural Policy Credits: 3.00
• AGEC 45000 - International Agricultural Trade Credits: 3.00
• AGR 20100 - Communicating Across Culture Credits: 3.00
• AGRY 12300 - Genetics And Society Credits: 3.00
• ANSC 33100 - The Role Of Horses In Human History, Culture, And Society Credits: 3.00
• ASEC 30100 - Building Intercultural Partnerships Credits: 3.00
• ASEC 33100 - The Role Of Horses In Human History, Culture And Society Credits: 3.00
• ASEC 35500 - Controversial Science And Media In The Public Sphere Credits: 3.00
• EDPS 23500 - Learning And Motivation Credits: 2.00 or 3.00
• EDPS 26500 - The Inclusive Classroom Credits: 3.00
• ENGL 11000 - SHOULD BE SCLA Credits: 3.00
• ENGL 22700 - Elements Of Linguistics Credits: 3.00
• ENGL 23000 - Great Narrative Works Credits: 3.00
• ENGL 23100 - Introduction To Literature Credits: 3.00
• ENGL 23200 - Thematic Studies In Literature Credits: 3.00
• ENGL 23700 - Introduction To Poetry Credits: 3.00
• ENGL 23800 - Introduction To Fiction Credits: 3.00
• ENGL 24000 - British Literature Before 1789 Credits: 3.00
• ENGL 24100 - British Literature After 1789 Credits: 3.00
• ENGL 25000 - Great American Books Credits: 3.00
• ENGL 25700 - Literature Of Black America Credits: 3.00
• ENGL 26200 - Greek And Roman Classics In Translation Credits: 3.00
• ENGL 26400 - The Bible As Literature Credits: 3.00
• ENGL 26600 - World Literature: From The Beginnings To 1700 A.D. Credits: 3.00
• ENGL 26700 - World Literature: From 1700 A.D. To The Present Credits: 3.00
• ENGL 27600 - Shakespeare On Film Credits: 3.00
• ENGL 27900 - The American Short Story In Print And Film Credits: 3.00
• ENGL 33100 - Medieval English Literature Credits: 3.00
• ENGL 35800 - Black Drama Credits: 3.00
• ENGL 35000 - American Literature Before 1865 Credits: 3.00
• ENGL 35100 - American Literature After 1865 Credits: 3.00
• ENGL 36000 - Gender And Literature Credits: 3.00
• ENGL 37300 - Science Fiction And Fantasy Credits: 3.00
• ENGL 37700 - Modern And Contemporary Poetry Credits: 3.00
• ENGL 37900 - The Short Story Credits: 3.00
• ENGL 38100 - The British Novel Credits: 3.00
• ENGL 38200 - The American Novel Credits: 3.00
• ENGL 38600 - History Of Film To 1950 Credits: 3.00
• ENGL 38700 - History Of Film Since 1950 Credits: 3.00
• ENGL 39600 - Studies In Literature And Language Credits: 1.00 to 3.00
• ENGL 41100 - Studies In Major Authors Credits: 3.00
• ENGL 41200 - Studies In Genre Credits: 3.00
• ENGL 41300 - Studies In Literature And History Credits: 3.00
• ENGL 41400 - Studies In Literature And Culture Credits: 3.00
• ENGL 44100 - Chaucer's Canterbury Tales Credits: 3.00
• ENGL 44200 - Shakespeare Credits: 3.00
• ENGL 46200 - The Bible As Literature: The Old Testament Credits: 3.00
• ENGL 46300 - The Bible As Literature: The New Testament Credits: 3.00
• ENGL 49200 - Literature In The Secondary Schools Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• HDFS 28000 - Diversity In Individual And Family Life Credits: 3.00
• HORT 30600 - History Of Horticulture Credits: 3.00
• HORT 45000 - In The English Landscape: Integrating History, Horticulture, And Landscape Architecture Credits: 3.00
• LA 16600 - History And Theory Of Landscape Architecture Credits: 3.00
• LA 45000 - In The English Landscape: Integrating History, Horticulture, and Landscape Architecture Credits: 3.00
• SLHS 22700 - Elements Of Linguistics Credits: 3.00

Agriculture Humanities or Social Sciences Selective (30000-59999)
- AAS 30000-59999 - African American Studies
- AD 30000-59999 - Art and Design
- AMST 30000-59999 - American Studies
- ANTH 30000-59999 - Anthropology
- ARAB 30000-59999 - Arabic
- ASAM 30000-59999 - Asian American Studies
- ASL 30000-59999 - American Sign Language
- BAND 30000-59999 - Bands (Maximum of 3 credits can be used for Humanities)
- CHNS 30000-59999 - Chinese
- CLCS 30000-59999 - Classics
- CMPL 30000-59999 - Comparative Literature
- DANC 30000-59999 - Dance
- ECON 30000-59999 - Economics
- FR 30000-59999 - French
- FVS 30000-59999 - Film and Video Studies
- GER 30000-59999 - German
- GREK 30000-59999 - Greek
- HEBR 30000-59999 - Hebrew
- HIST 30000-59999 - History
- IDIS 30000-59999 - Interdisciplinary Studies
- ITAL 30000-59999 - Italian
- JPNS 30000-59999 - Japanese
- JWST 30000-59999 - Jewish Studies
- KOR 30000-59999 - Korean
- LALS 30000-59999 - Latin America and Latino Studies
- LATN 30000-59999 - Latin
- LC 30000-59999 - Languages and Cultures
- LING 30000-59999 - Linguistics
- MARS 30000-59999 - Medieval and Renaissance Studies
- MUS 30000-59999 - Music
- PHIL 30000-59999 - Philosophy
- POL 30000-59999 - Political Science
- PSY 30000-59999 - Psychological Sciences
- PTGS 30000-59999 - Portuguese
- REL 30000-59999 - Religious Studies
- RUSS 30000-59999 - Russian
- SOC 30000-59999 - Sociology
- SPAN 30000-59999 - Spanish
- THTR 30000-59999 - Theatre
- WGSS 30000-59999 - Women's, Gender, And Sexuality Studies
- AGEC 30500 - Agricultural Prices Credits: 3.00
- AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 34000 - International Economic Development Credits: 3.00
- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
- AGEC 41000 - Agricultural Policy Credits: 3.00
- AGEC 45000 - International Agricultural Trade Credits: 3.00
- ASEC 30100 - Building Intercultural Partnerships Credits: 3.00
Human Cultures: Humanities Selectives

University Core Curriculum listing

Human Cultures: Behavioral/Social Sciences Selectives

University Core Curriculum listing

College of Agriculture Humanities or Social Science Selectives
(30000+ level)
Use Any Selective Area to fulfill this requirement

Agriculture Humanities or Social Sciences Selective

- AAS 10000-59999 - African American Studies
- AD 10000-59999 - Art and Design
- AMST 10000-59999 - American Studies
- ANTH 10000-59999 - Anthropology
- ARAB 10000-59999 - Arabic
- ASAM - 10000-59999 - Asian American Studies
- ASL - 10000-59999 - American Sign Language
- BAND 10000-59999 - Bands (Maximum of 3 credits can be used for Humanities)
- CHNS 10000-59999 - Chinese
- CLCS 10000-59999 - Classics
- CMPL 10000-59999 - Comparative Literature
- DANC 10000-59999 - Dance
- ECON 10000-59999 - Economics
- FR 10000-59999 - French
- FVS 10000-59999 - Film and Video Studies
- GER 10000-59999 - German
- GREK 10000-59999 - Greek
- HEBR 10000-59999 - Hebrew
- HIST 10000-59999 - History
- IDIS 10000-59999 - Interdisciplinary Studies
- ITAL 10000-59999 - Italian
- JPNS 10000-59999 - Japanese
- JWST 10000-59999 - Jewish Studies
- KOR 10000-59999 - Korean
- LALS 10000-59999 - Latin American and Latino Studies
- LATN 10000-59999 - Latin
- LC 10000-59999 - Languages and Cultures
- LING 10000-59999 - Linguistics
- MARS 10000-59999 - Medieval and Renaissance Studies
- MUS 10000-59999 - Music
- PHIL 10000-59999 - Philosophy
- POL 10000-59999 - Political Science
- PSY 10000-59999 - Psychological Sciences
- PTGS 10000-59999 - Portuguese
- REL 10000-59999 - Religious Studies
- RUSS 10000-59999 - Russian
- SOC 10000-59999 - Sociology
- SPAN 10000-59999 - Spanish
- THTR 10000-59999 - Theatre
- WGSS 10000-59999 - Women's, Gender, And Sexuality Studies
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
• AGEC 25000 - Economic Geography Of World Food And Resources Credits: 3.00
• AGEC 30500 - Agricultural Prices Credits: 3.00
• AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
• AGEC 34000 - International Economic Development Credits: 3.00
• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
• AGEC 41000 - Agricultural Policy Credits: 3.00
• AGEC 45000 - International Agricultural Trade Credits: 3.00
• AGR 20100 - Communicating Across Culture Credits: 3.00
• AGRY 12300 - Genetics And Society Credits: 3.00
• ANSC 33100 - The Role Of Horses In Human History, Culture, And Society Credits: 3.00
• ASEC 30100 - Building Intercultural Partnerships Credits: 3.00
• ASEC 33100 - The Role Of Horses In Human History, Culture And Society Credits: 3.00
• ASEC 35500 - Controversial Science And Media In The Public Sphere Credits: 3.00
• EDPS 23500 - Learning And Motivation Credits: 2.00 or 3.00
• EDPS 26500 - The Inclusive Classroom Credits: 3.00
• ENGL 11000 - SHOULD BE SCLA Credits: 3.00
• ENGL 22700 - Elements Of Linguistics Credits: 3.00
• ENGL 23000 - Great Narrative Works Credits: 3.00
• ENGL 23100 - Introduction To Literature Credits: 3.00
• ENGL 23200 - Thematic Studies In Literature Credits: 3.00
• ENGL 23700 - Introduction To Poetry Credits: 3.00
• ENGL 23800 - Introduction To Fiction Credits: 3.00
• ENGL 24000 - British Literature Before 1789 Credits: 3.00
• ENGL 24100 - British Literature After 1789 Credits: 3.00
• ENGL 25000 - Great American Books Credits: 3.00
• ENGL 25700 - Literature Of Black America Credits: 3.00
• ENGL 26200 - Greek And Roman Classics In Translation Credits: 3.00
• ENGL 26400 - The Bible As Literature Credits: 3.00
• ENGL 26600 - World Literature: From The Beginnings To 1700 A.D. Credits: 3.00
• ENGL 26700 - World Literature: From 1700 A.D. To The Present Credits: 3.00
• ENGL 27600 - Shakespeare On Film Credits: 3.00
• ENGL 27900 - The American Short Story In Print And Film Credits: 3.00
• ENGL 33100 - Medieval English Literature Credits: 3.00
• ENGL 35800 - Black Drama Credits: 3.00
• ENGL 35000 - American Literature Before 1865 Credits: 3.00
• ENGL 35100 - American Literature After 1865 Credits: 3.00
• ENGL 36000 - Gender And Literature Credits: 3.00
• ENGL 37300 - Science Fiction And Fantasy Credits: 3.00
• ENGL 37700 - Modern And Contemporary Poetry Credits: 3.00
• ENGL 37900 - The Short Story Credits: 3.00
• ENGL 38100 - The British Novel Credits: 3.00
• ENGL 38200 - The American Novel Credits: 3.00
• ENGL 38600 - History Of Film To 1950 Credits: 3.00
• ENGL 38700 - History Of Film Since 1950 Credits: 3.00
• ENGL 39600 - Studies In Literature And Language Credits: 1.00 to 3.00
• ENGL 41100 - Studies In Major Authors Credits: 3.00
• ENGL 41200 - Studies In Genre Credits: 3.00
• ENGL 41300 - Studies In Literature And History Credits: 3.00
• ENGL 41400 - Studies In Literature And Culture Credits: 3.00
• ENGL 44100 - Chaucer's Canterbury Tales Credits: 3.00
• ENGL 44200 - Shakespeare Credits: 3.00
• ENGL 46200 - The Bible As Literature: The Old Testament Credits: 3.00
• ENGL 46300 - The Bible As Literature: The New Testament Credits: 3.00
• ENGL 49200 - Literature In The Secondary Schools Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• HDFS 28000 - Diversity In Individual And Family Life Credits: 3.00
• HORT 30600 - History Of Horticulture Credits: 3.00
• HORT 45000 - In The English Landscape: Integrating History, Horticulture, And Landscape Architecture Credits: 3.00
• LA 45000 - In The English Landscape: Integrating History, Horticulture, and Landscape Architecture Credits: 3.00
• SLHS 22700 - Elements Of Linguistics Credits: 3.00

Agriculture Humanities or Social Sciences Selective (30000-59999)

• AAS 30000-59999 - African American Studies
• AD 30000-59999 - Art and Design
• AMST 30000-59999 - American Studies
• ANTH 30000-59999 - Anthropology
• ARAB 30000-59999 - Arabic
• ASAM 30000-59999 - Asian American Studies
• ASL 30000-59999 - American Sign Language
• BAND 30000-59999 - Bands (Maximum of 3 credits can be used for Humanities)
• CHNS 30000-59999 - Chinese
• CLCS 30000-59999 - Classics
• CMPL 30000-59999 - Comparative Literature
• DANC 30000-59999 - Dance
• ECON 30000-59999 - Economics
• FR 30000-59999 - French
• FVS 30000-59999 - Film and Video Studies
• GER 30000-59999 - German
• GREK 30000-59999 - Greek
• HEBR 30000-59999 - Hebrew
• HIST 30000-59999 - History
• IDIS 30000-59999 - Interdisciplinary Studies
• ITAL 30000-59999 - Italian
• JPNS 30000-59999 - Japanese
• JWST 30000-59999 - Jewish Studies
• KOR 30000-59999 - Korean
• LALS 30000-59999 - Latin America and Latino Studies
• LATN 30000-59999 - Latin
• LC 30000-59999 - Languages and Cultures
• LING 30000-59999 - Linguistics
• MARS 30000-59999 - Medieval and Renaissance Studies
- MUS 30000-59999 - Music
- PHIL 30000-59999 - Philosophy
- POL 30000-59999 - Political Science
- PSY 30000-59999 - Psychological Sciences
- PTGS 30000-59999 - Portuguese
- REL 30000-59999 - Religious Studies
- RUSS 30000-59999 - Russian
- SOC 30000-59999 - Sociology
- SPAN 30000-59999 - Spanish
- THTR 30000-59999 - Theatre
- WGS 30000-59999 - Women's, Gender, And Sexuality Studies
- AGE 30500 - Agricultural Prices 
  Credits: 3.00
- AGE 33300 - Food Distribution - A Retailing Perspective 
  Credits: 3.00
- AGE 34000 - International Economic Development 
  Credits: 3.00
- AGE 40600 - Natural Resource And Environmental Economics 
  Credits: 3.00
- AGE 41000 - Agricultural Policy 
  Credits: 3.00
- AGE 45000 - International Agricultural Trade 
  Credits: 3.00
- ASEC 30100 - Building Intercultural Partnerships 
  Credits: 3.00
- ASEC 33100 - The Role Of Horses In Human History, Culture And Society 
  Credits: 3.00
- ASEC 35500 - Controversial Science And Media In The Public Sphere 
  Credits: 3.00
- ENGL 33100 - Medieval English Literature 
  Credits: 3.00
- ENGL 35000 - American Literature Before 1865 
  Credits: 3.00
- ENGL 35100 - American Literature After 1865 
  Credits: 3.00
- ENGL 35800 - Black Drama 
  Credits: 3.00
- ENGL 36000 - Gender And Literature 
  Credits: 3.00
- ENGL 37300 - Science Fiction And Fantasy 
  Credits: 3.00
- ENGL 37700 - Modern And Contemporary Poetry 
  Credits: 3.00
- ENGL 37900 - The Short Story 
  Credits: 3.00
- ENGL 38100 - The British Novel 
  Credits: 3.00
- ENGL 38200 - The American Novel 
  Credits: 3.00
- ENGL 38600 - History Of Film To 1950 
  Credits: 3.00
- ENGL 38700 - History Of Film Since 1950 
  Credits: 3.00
- ENGL 39600 - Studies In Literature And Language 
  Credits: 1.00 to 3.00
- ENGL 41100 - Studies In Major Authors 
  Credits: 3.00
- ENGL 41200 - Studies In Genre 
  Credits: 3.00
- ENGL 41300 - Studies In Literature And History 
  Credits: 3.00
- ENGL 41400 - Studies In Literature And Culture 
  Credits: 3.00
- ENGL 44100 - Chaucer's Canterbury Tales 
  Credits: 3.00
- ENGL 44200 - Shakespeare 
  Credits: 3.00
- ENGL 46200 - The Bible As Literature: The Old Testament 
  Credits: 3.00
- ENGL 46300 - The Bible As Literature: The New Testament 
  Credits: 3.00
- ENGL 49200 - Literature In The Secondary Schools 
  Credits: 3.00
- FNR 37500 - Human Dimensions of Natural Resource Management 
  Credits: 3.00
- HORT 30600 - History Of Horticulture 
  Credits: 3.00
- HORT 45000 - In The English Landscape: Integrating History, Horticulture, And Landscape Architecture 
  Credits: 3.00
- LA 45000 - In The English Landscape: Integrating History, Horticulture, And Landscape Architecture 
  Credits: 3.00
Human Cultures: Humanities Selectives

University Core Curriculum listing

Human Cultures: Behavioral/Social Sciences Selectives

University Core Curriculum listing

College of Agriculture International Understanding Selective

International Understanding

- AGEC 25000 - Economic Geography Of World Food And Resources Credits: 3.00
- AGEC 34000 - International Economic Development Credits: 3.00
- AGEC 45000 - International Agricultural Trade Credits: 3.00
- AGR 49500 - International Professional Experience In Agriculture, Food, Or Natural Resources Credits: 0.00
- AGR 49300 - Special Topics In International Agriculture Credits: 0.00 to 3.00
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- AGRY 35000 - Global Awareness Credits: 1.00 to 3.00
- ANSC 29400 - Exploring International Animal Agriculture Credits: 3.00
- ANSC 33100 - The Role Of Horses In Human History, Culture, And Society Credits: 3.00
- ANTH 10000 - Being Human: Introduction To Anthropology Credits: 3.00
- ANTH 20500 - Human Cultural Diversity Credits: 3.00
- ARAB 10000-59900 - Arabic
- ASEC 30100 - Building Intercultural Partnerships Credits: 3.00
- ASEC 33100 - The Role Of Horses In Human History, Culture And Society Credits: 3.00
- ASEC 43100 - Planning For International Engagement Methods Credits: 1.00
- ASEC 43110 - International Engagement Methods Credits: 1.00 to 3.00
- ASEC 43120 - Evaluating International Engagement Methods Credits: 1.00
- ASEC 53100 - Global Learning For Agriculture, Food And Natural Resources Credits: 3.00
- ASEC 55100 - International Engagement And Development Strategies Credits: 3.00
- CHNS 10000-59900 - Chinese
- CLCS 10000-59900 - Classics
- BTNY 28500 - Plants And Civilization Credits: 3.00
- BTNY 43100 - Planning For International Engagement Methods Credits: 1.00
- BTNY 43110 - International Engagement Methods Credits: 1.00 to 3.00
- BTNY 43120 - Evaluating International Engagement Methods Credits: 1.00
- COM 22400 - Communicating In The Global Workplace Credits: 3.00
- ECON 37000 - International Trade Credits: 3.00
- ECON 46600 - International Economics Credits: 3.00
- ENGL 26600 - World Literature: From The Beginnings To 1700 A.D. Credits: 3.00
- ENGL 26700 - World Literature: From 1700 A.D. To The Present Credits: 3.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 30200 - Global Sustainability Issues Credits: 2.00
- FNR 46000 - International Natural Resources Summer Program Credits: 3.00
- FR 10000-59900 - French
• GER 10000-59900 - German
• GREK 10000-59900 - Greek
• HEBR 10000-59900 - Hebrew
• HIST 10400 - Introduction To The Modern World Credits: 3.00
• HIST 10500 - Survey Of Global History Credits: 3.00
• HIST 23005 - Hitler's Europe Credits: 3.00
• HIST 23800 - History Of Russia From Medieval Times To 1861 Credits: 3.00
• HIST 23900 - History Of Russia From 1861 To The Present Credits: 3.00
• HIST 24000 - East Asia And Its Historic Tradition Credits: 3.00
• HIST 24100 - East Asia In The Modern World Credits: 3.00
• HIST 24300 - South Asian History And Civilizations Credits: 3.00
• HIST 24600 - Modern Middle East And North Africa Credits: 3.00
• HIST 27100 - Introduction To Colonial Latin American History (1492-1810) Credits: 3.00
• HIST 27200 - Introduction To Modern Latin American History (1810 To The Present) Credits: 3.00
• HIST 30000 - Eve Of Destruction: Global Crises And World Organization In The 20th Century Credits: 3.00
• HIST 31205 - The Arab-Israeli Conflict Credits: 3.00
• HIST 31905 - Christianity In The Global Age Credits: 3.00
• HIST 32300 - German History Credits: 3.00
• HIST 32400 - Modern France Credits: 3.00
• HIST 33700 - Europe Since 1945 Credits: 3.00
• HIST 34000 - Modern China Credits: 3.00
• HIST 34300 - Traditional Japan Credits: 3.00
• HIST 34400 - History Of Japan Credits: 3.00
• HIST 35100 - The Second World War Credits: 3.00
• HIST 37005 - Queens And Empresses In Early Modern Europe Credits: 3.00
• HIST 38700 - History Of The Space Age Credits: 3.00
• HIST 40800 - Dictatorship And Democracy: Europe 1919-1945 Credits: 3.00
• HIST 43900 - Communist China Credits: 3.00
• HIST 44100 - Africa In The Twentieth Century Credits: 3.00
• HIST 49500 - The Holocaust And Genocide Credits: 3.00
• HORT 30600 - History Of Horticulture Credits: 3.00
• HORT 40300 - Tropical Horticulture Credits: 3.00
• HORT 45000 - In The English Landscape: Integrating History, Horticulture, And Landscape Architecture Credits: 3.00
• HTM 39800 - International Special Topics Credits: 1.00 to 6.00
• ITAL 10000-59999 - Italian
• JPNS 10000-59999 - Japanese
• KOR 10000-59999 - Korean
• LATN 10000-59999 - Latin
• LA 45000 - In The English Landscape: Integrating History, Horticulture, And Landscape Architecture Credits: 3.00
• LA 16600 - History And Theory Of Landscape Architecture Credits: 3.00
• PHIL 11000 - The Big Questions: Introduction To Philosophy Credits: 3.00
• PHIL 11400 - Global Moral Issues Credits: 3.00
• PHIL 23000 - Religions Of The East Credits: 3.00
• PHIL 23100 - Religions Of The West Credits: 3.00
• POL 13000 - Introduction To International Relations Credits: 3.00
• POL 14100 - Governments Of The World Credits: 3.00
• POL 23100 - Introduction To United States Foreign Policy Credits: 3.00
• POL 23200 - Contemporary Crises In International Relations Credits: 3.00
• POL 23500 - International Relations Among Rich And Poor Nations Credits: 3.00
• POL 23700 - Modern Weapons And International Relations Credits: 3.00
• POL 32700 - Global Green Politics Credits: 3.00
• POL 33500 - China And The Challenges Of Globalization Credits: 3.00
• POL 34500 - West European Democracies In The Post-Industrial Era Credits: 3.00
• POL 34800 - East Asian Politics Credits: 3.00
• POL 42300 - International Environmental Policy Credits: 3.00
• POL 43300 - International Organization Credits: 3.00
• POL 43500 - International Law Credits: 3.00
• PTGS 10000-59900 - Portuguese
• REL 23000 - Religions Of The East Credits: 3.00
• REL 23100 - Religions Of The West Credits: 3.00
• RUSS 10000-59900 - Russian
• SPAN 10000-59900 - Spanish

College of Agriculture Multicultural Awareness Selective

Multicultural Awareness

• AGR 20100 - Communicating Across Culture Credits: 3.00
• ANTH 20500 - Human Cultural Diversity Credits: 3.00
• ANTH 23000 - Gender Across Cultures Credits: 3.00
• ANTH 37900 - Native American Cultures Credits: 3.00
• EDCI 28500 - Multiculturalism And Education Credits: 2.00 to 3.00
• EDPS 31600 - Collaborative Leadership: Cross-Cultural Settings Credits: 3.00
• HIST 37700 - History And Culture Of Native America Credits: 3.00
• PSY 33500 - Stereotyping And Prejudice Credits: 3.00
• SFS 41100 - Structural Racism In US Agriculture Credits: 1.00
• SFS 41200 - Colonialism, Globalization, And Food Justice Credits: 1.00
• SFS 41300 - The Cultures And Agricultures Of The United States Credits: 1.00
• SOC 22000 - Social Problems Credits: 3.00
• SOC 31000 - Race And Ethnicity Credits: 3.00
• SOC 35600 - Hate And Violence Credits: 3.00

Interdisciplinary Agriculture Supplemental Information

Agriculture Selective (15 credits)

• ABE 10000:59999
• AGEC 10000:59999
• AGR 10000:59999
• AGRY 10000:59999
• ANSC 10000:59999
Agriculture Selective 30000+ Level (21 credits)

- ABE 30000:59999
- AGEC 30000:59999
- AGR 30000:59999
- AGRY 30000:59999
- ANSC 30000:59999
- ASEC 30000:59999
- ASM 30000:59999
- BCHM 30000:59999
- BTN 30000:59999
- ENPM 30000:59999
- FNR 30000:59999
- FS 30000:59999
- HORT 30000:59999
- LA 30000:59999
- NRES 30000:59999
- SFS 30000:59999

College of Agriculture: Additional Mathematics or Science Selectives

- AGR 33300 - Data Science For Agriculture Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
- AGEC 45100 - Applied Econometrics Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 27000 - Forest Soils Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 46500 - Soil Physical Properties Credits: 3.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
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<td>BCHM 30700</td>
<td>Biochemistry</td>
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<td>BCHM 30900</td>
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<td>BIOL 22100</td>
<td>Introduction To Microbiology</td>
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<td>Biology III: Cell Structure And Function</td>
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<td>BIOL 23200</td>
<td>Laboratory In Biology III: Cell Structure And Function</td>
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<td>Biology IV: Genetics And Molecular Biology</td>
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<td>BIOL 28600</td>
<td>Introduction To Ecology And Evolution</td>
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<td>Introduction To Plant Science</td>
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<td>Plant Structure And Tissue Biology</td>
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<td>Introductory Plant Pathology</td>
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<td>BTNY 30500</td>
<td>Plant Evolution And Taxonomy</td>
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<td>BTNY 35000</td>
<td>Biotechnology In Agriculture</td>
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<td>BTNY 53500</td>
<td>Plant Disease Epidemiology</td>
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<td>CHM 22400</td>
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<td>Ecology And Systematics Of Mammals And Birds</td>
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<td>MA 16200</td>
<td>Plane Analytic Geometry And Calculus II</td>
<td>5.00</td>
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<td>MA 26100</td>
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<td>MA 26500</td>
<td>Linear Algebra</td>
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<tr>
<td>NRES 12500</td>
<td>Environmental Science And Conservation</td>
<td>3.00</td>
</tr>
<tr>
<td>NRES 23000</td>
<td>Survey Of Meteorology</td>
<td>3.00</td>
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<td>NRES 25500</td>
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<tr>
<td>PHYS 17200</td>
<td>Modern Mechanics</td>
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<tr>
<td>PHYS 21400</td>
<td>The Nature Of Physics</td>
<td>3.00</td>
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<td>PHYS 22000</td>
<td>General Physics</td>
<td>4.00</td>
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<tr>
<td>PHYS 22100</td>
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<td>4.00</td>
</tr>
<tr>
<td>PHYS 23300</td>
<td>Physics For Life Sciences</td>
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<td>PHYS 23400</td>
<td>Physics For Life Sciences</td>
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<tr>
<td>PHYS 24100</td>
<td>Electricity And Optics</td>
<td>3.00</td>
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<tr>
<td>STAT 22500</td>
<td>Introduction To Probability Models</td>
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<tr>
<td>STAT 50200</td>
<td>Experimental Statistics II</td>
<td>3.00</td>
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<tr>
<td>STAT 51100</td>
<td>Statistical Methods</td>
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</tr>
<tr>
<td>STAT 51200</td>
<td>Applied Regression Analysis</td>
<td>3.00</td>
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</table>

Natural Resources and Environmental Science Supplemental Information

Broadening Science Selective (3 credits)

Courses meant to encourage exploration at introductory level in related fields, or to encourage optional laboratory courses. In addition to the College of Agriculture's 'Additional Math and Science Selectives', any concentration selective that is not being used to complete the NRES requirement can count. We will also use any course listed on the University Core Science (SCI) or the University Core Science, Technology & Society (STS) list to fulfill a Broadening Science Selective that is not already being used to fulfill any other degree requirement.

Concentrations requiring this selective: Climate & Energy Solutions; Emerging Environmental Challenges; Environmental Policy & Analysis; Environmental Quality & Restoration; Watershed Management; Sustainability Science

<table>
<thead>
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<th>Course Code</th>
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<tr>
<td>AGE 35200</td>
<td>Quantitative Techniques For Firm Decision Making</td>
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<td>AGE 45100</td>
<td>Applied Econometrics</td>
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<td>AGRY 25500</td>
<td>Soil Science</td>
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<tr>
<td>AGRY 27000</td>
<td>Forest Soils</td>
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<tr>
<td>AGRY 32000</td>
<td>Genetics</td>
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<tr>
<td>AGRY 32100</td>
<td>Genetics Laboratory</td>
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<tr>
<td>AGRY 33500</td>
<td>Weather And Climate</td>
<td>3.00</td>
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• AGRY 36500 - Soil Fertility Credits: 3.00
• AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
• AGRY 46500 - Soil Physical Properties Credits: 3.00
• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
• ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
• BCHM 10000 - Introduction To Biochemistry Credits: 2.00
• BCHM 30700 - Biochemistry Credits: 3.00
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
• BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
• CHM 22400 - Introductory Quantitative Analysis Credits: 4.00
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
• CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
• CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• CHM 26100 - Organic Chemistry I Credits: 3.00
• CHM 26200 - Organic Chemistry II Credits: 3.00
• CHM 26300 - Organic Chemistry Laboratory I Credits: 1.00
• CHM 26400 - Organic Chemistry Laboratory II Credits: 1.00
• CS 15900 - C Programming Credits: 3.00
• CS 18000 - Problem Solving And Object-Oriented Programming Credits: 4.00
• EAPS 11100 - Physical Geology Credits: 3.00
• EAPS 11200 - Earth Through Time Credits: 3.00
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00
• EAPS 22100 - Survey Of Atmospheric Science Credits: 3.00
• ENTM 10200 - The Practice Of Science Credits: 2.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
• ENTM 25300 - Insect Physiology And Biochemistry Credits: 4.00
• ENTM 30100 - Experimentation And Analysis Credits: 3.00
• ENTM 31200 - Plant-Insect Chemical Ecology Credits: 3.00
• ENTM 32810 - Practical Molecular Biology Credits: 3.00
• ENTM 35300 - Insecticides And Environment Credits: 3.00
• ENTM 41000 - Applied Insect Biology Credits: 2.00
• ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
• FNR 20100 - Marine Biology Credits: 3.00
• FNR 23000 - The World's Forests And Society Credits: 3.00
• FNR 24000 - Wildlife In America Credits: 3.00
• FNR 30500 - Conservation Genetics Credits: 3.00
<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FNR 35700</td>
<td>Fundamental Remote Sensing</td>
<td>3.00</td>
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<tr>
<td>HORT 30100</td>
<td>Plant Physiology</td>
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</tr>
<tr>
<td>MA 16200</td>
<td>Plane Analytic Geometry And Calculus II</td>
<td>5.00</td>
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<td>Multivariate Calculus</td>
<td>4.00</td>
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<td>MA 26500</td>
<td>Linear Algebra</td>
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<tr>
<td>NRES 23000</td>
<td>Survey Of Meteorology</td>
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<tr>
<td>PHYS 24100</td>
<td>Electricity And Optics</td>
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**Additional Mathematics and Statistic Selective**

Required for all concentrations except Climate & Energy and Sustainability Science, which require MA 16020.

<table>
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<tr>
<td>MA 16020</td>
<td>Applied Calculus II</td>
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<td>Multivariate Calculus</td>
<td>4.00</td>
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<tr>
<td>MA 26500</td>
<td>Linear Algebra</td>
<td>3.00</td>
</tr>
<tr>
<td>SOC 38200</td>
<td>Introduction To Statistics In Sociology</td>
<td>3.00</td>
</tr>
<tr>
<td>STAT 22500</td>
<td>Introduction To Probability Models</td>
<td>3.00</td>
</tr>
<tr>
<td>STAT 30301</td>
<td>Probability And Statistics For Business</td>
<td>3.00</td>
</tr>
<tr>
<td>STAT 35500</td>
<td>Statistics For Data Science</td>
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<tr>
<td>STAT 50200</td>
<td>Experimental Statistics II</td>
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**NRES Data Science Selective (3 credits)**

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<td>AGEC 35200</td>
<td>Quantitative Techniques For Firm Decision Making</td>
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<td>AGEC 45100</td>
<td>Applied Econometrics</td>
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<tr>
<td>AGEC 51600</td>
<td>Mathematical Tools For Agricultural And Applied Economics</td>
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<tr>
<td>AGR 33300</td>
<td>Data Science For Agriculture</td>
<td>3.00</td>
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<tr>
<td>AGRY 54500</td>
<td>Remote Sensing Of Land Resources</td>
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<tr>
<td>BNTY 20800</td>
<td>Introduction To Plant Science Research</td>
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<tr>
<td>CS 17700</td>
<td>Programming With Multimedia Objects</td>
<td>4.00</td>
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<tr>
<td>ENTM 24200</td>
<td>Data Science</td>
<td>3.00</td>
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<tr>
<td>ENTM 30100</td>
<td>Experimentation And Analysis</td>
<td>3.00</td>
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<tr>
<td>FNR 35700</td>
<td>Fundamental Remote Sensing</td>
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<tr>
<td>STAT 22500</td>
<td>Introduction To Probability Models</td>
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<tr>
<td>STAT 30301</td>
<td>Probability And Statistics For Business</td>
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- STAT 35500 - Statistics For Data Science Credits: 3.00
- STAT 50200 - Experimental Statistics II Credits: 3.00
- STAT 50300 - Statistical Methods For Biology Credits: 3.00
- STAT 51100 - Statistical Methods Credits: 3.00
- FNR 35910 - Spatial Ecology Credits: 2.00 and
- FNR 35950 - Spatial Ecology Laboratory Credits: 1.00

NRES Concentration Selectives

Climate and Energy Solutions Concentration Selectives (12 credits)

- AD 39700 - Sustainability In The Built Environment Credits: 3.00
- ANTH 21000 - Technology And Culture Credits: 3.00
- ASEC 35500 - Controversial Science And Media In The Public Sphere Credits: 3.00
- EAPS 10900 - The Dynamic Earth Credits: 3.00
- EAPS 31500 - Biogeochemistry Credits: 3.00
- EAPS 32700 - Climate, Science And Society Credits: 3.00
- EAPS 37500 - Great Issues - Fossil Fuels, Energy And Society Credits: 3.00
- EAPS 42000 - Global Change Modeling Credits: 3.00
- EAPS 53000 - Extreme Weather And Climate: Science And Risk Credits: 3.00
- ECET 22400 - Electronic Systems Credits: 3.00
- EPCS 40100 - Senior Participation In EPICS Credits: 1.00 or
- EPCS 40200 - Senior Participation In EPICS Credits: 2.00
- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- MET 53000 - Facilities Engineering Technology Credits: 3.00
- NRES 38010 - Hazardous Waste Handling Credits: 3.00
- PHIL 40300 - Moral Psychology And Climate Change Credits: 3.00
- POL 42800 - The Politics Of Regulation Credits: 3.00

Emerging Environmental Challenges Concentration Selectives (21 credits)

Students define an interdisciplinary topic of study that is not currently captured by any existing majors on campus. In consultation with a faculty mentor and/or the co-directors the student will propose a sequence of classes that addresses the identified topic.

1. All NRES core academic requirements must be met.
2. No more than 2 classes can be under 30000+ level.
3. The classes as a group should pursue an environmentally related subject.
4. The courses should not originate from a single department. NRES strives to be interdisciplinary, and the student initiated concentration should be interdisciplinary.
5. The student must meet with his/her academic advisor to plan the student initiated concentration.
6. The NRES director must approve the selected courses.
7. No more than 3 credits can come from independent study.
Environmental Policy and Analysis Concentration Selectives (12 credits)

- AGEC 41000 - Agricultural Policy Credits: 3.00
- ANTH 32700 - Environment And Culture Credits: 3.00
- CE 51200 - Urban Planning And Analysis Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00
- ECON 36700 - Law And Economics Credits: 3.00
- ENGL 34400 - Environmental Ethics, Policy, And Sustainability Credits: 3.00
- EPCS 40100 - Senior Participation In EPICS Credits: 1.00 or
- EPCS 40200 - Senior Participation In EPICS Credits: 2.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
- FNR 58600 - Urban Ecology Credits: 3.00
- NRES 38010 - Hazardous Waste Handling Credits: 3.00
- NRES 48500 - Environmental Communications Credits: 3.00
- PHIL 29000 - Environmental Ethics Credits: 3.00
- POL 32300 - Comparative Environmental Policy Credits: 3.00
- POL 42300 - International Environmental Policy Credits: 3.00
- POL 42800 - The Politics Of Regulation Credits: 3.00
- POL 46100 - Constitutional Law I Credits: 3.00
- POL 52300 - Environmental Politics And Public Policy Credits: 3.00
- SOC 34400 - Environmental Sociology Credits: 3.00
- SOC 41900 - Sociology Of Law Credits: 3.00

Environmental Quality and Restoration Concentration Selectives (12 credits)

- ABE 42500 - Water Quality Engineering Credits: 3.00
- ABE 42600 - Ecological Restoration Engineering Credits: 3.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 33700 - Environmental Hydrology Credits: 3.00
- AGRY 34900 - Soil Ecology Credits: 3.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 45000 - Soil Conservation and Water Management Credits: 3.00
- AGRY 56500 - Soils And Landscapes Credits: 3.00
- AGRY 58500 - Soils And Land Use Credits: 3.00
- ASM 23600 - Environmental Systems Management Credits: 3.00
- CE 45700 - Air Pollution Control And Design Credits: 3.00
- CE 55700 - Air Quality Management Credits: 3.00
- EEE 30000 - Environmental And Ecological Systems Modeling Credits: 3.00
- EEE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00
- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- EPCS 40100 - Senior Participation In EPICS Credits: 1.00 or
- EPCS 40200 - Senior Participation In EPICS Credits: 2.00
- FNR 20100 - Marine Biology Credits: 3.00
- FNR 33350 - Applied Fire Ecology Credits: 3.00
- FNR 35100 - Aquatic Sampling Techniques Credits: 3.00
- FNR 35500 - Quantitative Methods For Resource Management Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- FNR 58600 - Urban Ecology Credits: 3.00
- HSCI 20200 - Essentials Of Environmental, Occupational, And Radiological Health Sciences Credits: 3.00
- HSCI 34500 - Introduction To Occupational And Environmental Health Sciences Credits: 3.00
- NRES 23000 - Survey Of Meteorology Credits: 3.00
- SFS 30200 - Principles Of Sustainability Credits: 3.00

**Sustainability Science Concentration Selectives (12 credits)**

- AD 39700 - Sustainability In The Built Environment Credits: 3.00
- AGEC 52800 - Global Change And The Challenge Of Sustainably Feeding A Growing Planet Credits: 3.00
- ANTH 39300 - Interdisciplinary Approaches To Environmental And Sustainability Studies Credits: 3.00 or
- ENGL 39300 - Interdisciplinary Approaches To Environmental And Sustainability Studies Credits: 3.00
- ASM 23600 - Environmental Systems Management Credits: 3.00
- EDCI 50600 - Environmental Education Credits: 3.00
- ENGL 34400 - Environmental Ethics, Policy, And Sustainability Credits: 3.00
- EPCS 40100 - Senior Participation In EPICS Credits: 1.00 or
- EPCS 40200 - Senior Participation In EPICS Credits: 2.00
- FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
- FNR 30200 - Global Sustainability Issues Credits: 2.00
- HTM 37000 - Sustainable Tourism And Responsible Travel Credits: 3.00
- IET 23500 - Introduction To Systems Thinking And Process Improvement Credits: 3.00
- NRES 38010 - Hazardous Waste Handling Credits: 3.00
- SYS 30000 - It's A Complex World - Addressing Global Challenges Credits: 3.00

**Watershed Management Concentration Selectives (12 credits)**

- ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 34900 - Soil Ecology Credits: 3.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 56000 - Soil Physics Credits: 3.00
- AGRY 56500 - Soils And Landscapes Credits: 3.00
- AGRY 58500 - Soils And Land Use Credits: 3.00
- ASEC 54000 - Program Development In Agricultural And Extension Education Credits: 3.00
- ASEC 54500 - Teaching STEM Through Agriculture, Food And Natural Resources Credits: 3.00
- ASEC 55000 - Program Evaluation In Formal And Non-formal Settings Credits: 3.00
- ASM 23600 - Environmental Systems Management Credits: 3.00
- BIOL 48300 - Great Issues: Environmental And Conservation Biology Credits: 3.00
- CE 54900 - Computational Watershed Hydrology Credits: 3.00
- EDCI 50600 - Environmental Education Credits: 3.00
- EEE 30000 - Environmental And Ecological Systems Modeling Credits: 3.00
- EPCS 40100 - Senior Participation In EPICS Credits: 1.00 or
- EPCS 40200 - Senior Participation In EPICS Credits: 2.00
- FNR 35100 - Aquatic Sampling Techniques Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- FNR 35910 - Spatial Ecology Credits: 2.00
- FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
- FNR 58600 - Urban Ecology Credits: 3.00
- NRES 23000 - Survey Of Meteorology Credits: 3.00
- NRES 38010 - Hazardous Waste Handling Credits: 3.00
- SFS 30100 - Agroecology Credits: 3.00

Ecology Selectives (2-3 credits)

- AGRY 34900 - Soil Ecology Credits: 3.00
- BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
- BTNY 30200 - Plant Ecology Credits: 3.00
- EN TM 31100 - Insect Ecology Credits: 3.00

Pre-Veterinary Medicine Supplemental Information

Agricultural Selective (9 credits)

- ABE 10000:59999
- AGEC 10000:59999
- AGR 10000:59999
- AGRY 10000:59999
- ANSC 10000:59999
- ASEC 10000:59999
- ASM 10000:59999
- BCHM 10000:59999
- BTNY 10000:59999
- EN TM 10000:59999
- FNR 10000:59999
- FS 10000:59999
- HORT 10000:59999
- LA 10000:59999
- NRES 10000:59999
- SFS 10000:59999

Pre-Program

Plant Studies - Exploratory (Pre)

About the Program

This pre-major is intended to serve as an optional entry point/portal for students interested in life sciences and enrolling in the Purdue College of Agriculture with an interest in plants but who are uncertain about the differences between all the majors and career options. As a Plant Studies - Exploratory major, students will make progress toward their Bachelor of Science degree and engage the numerous experiential learning opportunities (e.g. learning communities, clubs, leadership opportunities, Study Abroad, etc.) offered in the College. Students will have up to 4-semesters or 60 total credits to explore the various majors before
selecting one that best meets their educational and career interests. It is anticipated that most students will likely select a major by the end of their first two semesters.

Plant Studies-Exploratory Major Change (CODO) Requirements

Degree Requirements

31.5-34.5 credits Required

Departmental/Program Major Courses (2.5 credits)

Required Major Courses (2.5 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12500 - Introduction To Plant Science Credits: 1.00
- AGR 29000 - Special Topics In Agriculture Credits: 0.00 to 3.00 (Study Plants at Purdue Learning Community) - Credit Hours: 1.00

Other Departmental/Program Course Requirements (26-31 credits)

- AGER 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00 or
- CHM 11500 - General Chemistry Credits: 4.00
- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00
- MA 16020 - Applied Calculus II Credits: 3.00 or
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
  Selective Exploratory Plant Science - Credit Hours: 1.00-3.00
- AGRY 10500 - Crop Production Credits: 3.00
- AGRY 12300 - Genetics And Society Credits: 3.00
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- BTNY 20700 - The Microbial World Credits: 3.00
- BTNY 28500 - Plants And Civilization Credits: 3.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 12100 - Medicine In The Garden Credits: 1.00
- LA 16100 - Land And Society Credits: 1.00
- LA 16600 - History And Theory Of Landscape Architecture Credits: 3.00
- SFS 31200 - Urban Agriculture Credits: 1.00

Electives (1-3 credits)
Program Requirements

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12500 - Introduction To Plant Science Credits: 1.00
- AGR 29000 - Special Topics In Agriculture Credits: 0.00 to 3.00 (Study Plants at Purdue Learning Community) - Credit Hours: 1.00
- MA 16010 - Applied Calculus I Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00 or
- CHM 11500 - General Chemistry Credits: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00

15.5-17.5 Credits

Spring 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00
- MA 16020 - Applied Calculus II Credits: 3.00 or
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Selective Exploratory Plant Science - Credit Hours: 1.00-3.00
- Oral Communication Selective - Credit Hours: 3.00
- Elective - Credit Hours 1.00-3.00

14-19 Credits

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.
Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Pre-Veterinary Medicine**

**About the Program**

Pre-veterinary medicine is not really a major, but rather is a collection of prerequisites for admission to Purdue's College of Veterinary Medicine. Students may enter the College of Agriculture in this category, but later must pick a major to pursue. Students pursuing a wide variety of curricula may apply and be admitted to a veterinary college.

The pre-veterinary medicine curriculum includes courses that are required for admission to the Doctor of Veterinary Medicine degree program offered by the Purdue College of Veterinary Medicine. This program of study, coordinated by the College of Agriculture Office of Academic Programs, emphasizes the biological and physical sciences that are foundations for successful study of veterinary medicine. Also, the curriculum includes courses in communication and the social sciences.

**OAP • Pre-Professional**

Pre-Veterinary Medicine Major Change (CODO) Requirements

**Degree Requirements**

**92 Credits Required**

**Departmental/Program Major Courses (18 credits)**

**Required Major Courses (9 credits)**

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University **Credits:** 0.50
- AGR 12400 - Introduction To College Of Agriculture Pre-Veterinary Medicine Academic Programs **Credits:** 0.50
- AGRY 32000 - Genetics **Credits:** 3.00
- AGRY 32100 - Genetics Laboratory **Credits:** 1.00
- ANSC 22100 - Principles Of Animal Nutrition **Credits:** 3.00
- VM 10200 - Careers In Veterinary Medicine **Credits:** 1.00

**Agricultural Selectives (9 credits)**

- ABE 10000:59999
- AGEC 10000:59999
- AGR 10000:59999
- AGRY 10000:59999
- ANSC 10000:59999
- ASEC 10000:59999
Other Departmental/Program Course Requirements (68-69 credits)

- BCHM 30700 - Biochemistry Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 (satisfies Science #1 for core)
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 (satisfies Science #2 for core)
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
- CHM 11500 - General Chemistry Credits: 4.00
- CHM 11600 - General Chemistry Credits: 4.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- PHYS 22000 - General Physics Credits: 4.00
- PHYS 22100 - General Physics Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
  Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
- COM 21700 - Science Writing And Presentation Credits: 3.00
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
  Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00
- ENGL 10800 - First Year Composition Credits: 3.00
- HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
- SCLA 10100 - Transformative Texts, Critical Thinking And Communication I: Antiquity To Modernity Credits: 3.00
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- ECON 21000 - Principles Of Economics Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
• Science, Technology, & Society Selective - Credit Hours: 3.00 (satisfies Science, Technology, & Society for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

**Electives (5-6 credits)**

• Elective - Credit Hours: 5.00-6.00

**College of Agriculture & University Level Requirements**

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

**College of Agriculture Pass/No Pass Policy**

College of Agriculture Undergraduate Pass/No Pass Policy

**Transfer Credit Policy**

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

**GPA Requirements**

• 2.0 GPA required for Bachelor of Science degree.

**University Requirements**

**University Core Requirements**

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample Plan of Study

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12400 - Introduction To College Of Agriculture Pre-Veterinary Medicine Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
- CHM 11500 - General Chemistry Credits: 4.00
- MA 16010 - Applied Calculus I Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00 or
- ENGL 10800 - First Year Composition Credits: 3.00 or
- HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00 or
- SCLA 10100 - Transformative Texts, Critical Thinking And Communication I: Antiquity To Modernity Credits: 3.00

15-16 Credits

Spring 1st Year
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
- CHM 11600 - General Chemistry Credits: 4.00
- VM 10200 - Careers In Veterinary Medicine Credits: 1.00

Oral Communication Selective - Credit Hours: 3.00
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 or
- COM 21700 - Science Writing And Presentation Credits: 3.00 or
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00

Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- ECON 21000 - Principles Of Economics Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00

15 Credits

Fall 2nd Year
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
- Science, Technology, & Society Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
- Agricultural Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

17 Credits

Fall 3rd Year
- BCHM 30700 - Biochemistry Credits: 3.00
- PHYS 22000 - General Physics Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Agricultural Selective - Credit Hours: 3.00
- Elective - Credit Hours: 2.00-3.00

15-16 Credits

Spring 3rd Year

- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- PHYS 22100 - General Physics Credits: 4.00
- Agricultural Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00

14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

- Department of Agricultural and Biological Engineering
Overview

Welcome to the Department of Agricultural & Biological Engineering at Purdue University. Our mission is to prepare students, citizens, and industry for the future through innovative education and extension/outreach programs and the discovery of knowledge.

Our cross-disciplinary strengths include academic and research programs in agriculture, biology, and engineering, as well as dual degree programs. Agricultural and Biological Engineering offers three degree programs, including two engineering programs: Bachelor of Science in Engineering in Agricultural Engineering (BSAGE) and Bachelor of Science in Engineering in Biological Engineering (BSBE), and one agriculture program: Agricultural Systems Management, BS. ABE’s degree programs also offer multiple majors and concentrations. The job market remains strong for our graduates who have excellent career opportunities, and demand for our graduates is very high.

Our faculty, students and staff are pursuing cutting-edge research that improves quality of life as well as advances scientific and engineering frontiers. Our extension programs are helping citizens of Indiana and beyond improve their lives.

Agricultural Systems Management

The Agricultural Systems Management program prepares graduates to develop and manage technology-intensive agricultural production and processing systems. ASM graduates are problem solvers. They benefit from a diverse applied agricultural curriculum that includes opportunities for extensive career-related experience at home and abroad.

Biological Engineering

This program deals with the applications of basic scientific and engineering principles to the design, development and operation of large scale manufacture of food and biologically-based products. Such products are environmentally friendly, renewable and represent a future wave of consumer demand for better health and environment. In addition to learning the engineering aspects of food and biological processing, you will also learn the basic principles in biochemistry and food sciences.

Dual Degree programs with Biological Engineering and Biochemistry or Pharmaceutical Sciences are also offered - these programs require an additional year of courses leading to two degrees.

Agricultural Engineering - major in Environmental & Natural Resources Engineering

This major prepares engineers with specialized expertise to design and analyze new and environmentally sound ways to produce food and fiber while conserving our natural resources. Students gain expertise in areas such as watershed management, geographic information systems, computer-based watershed modeling, and contaminant transport models, and soil and water conservation engineering practices.

Agricultural Engineering - major in Machine Systems Engineering

This major prepares students with a background in mechanical design, hydraulics, instrumentation and control, finite element analysis, electronics and sensors to design, develop, analyze and operate machines and systems for agricultural and biological products and processes, materials handling, construction and mining, forestry, lawn- and ground-care, and food and fiber production and processing.

Faculty (website)
Department of Agricultural and Biological Engineering (website)

Contact Information

Purdue University
Agricultural and Biological Engineering
225 South University Street
West Lafayette, IN 47907-2093
Phone: (765) 494-1162
Fax: (765) 496-1115
Email: joinabe@ecn.purdue.edu

Current Students - Click here for advising and degree requirement resources.

Prospective Students - Click here to learn more and schedule a visit.

Graduate Information

For Graduate information please see Department of Agricultural and Biological Engineering (Graduate)

Bachelor of Science

Agricultural Systems Management, BS

About the Program

Agricultural Systems Management (ASM) prepares individuals to organize and manage environmentally sound, technology-based businesses. The program's emphasis is on planning and directing an industry or business project with responsibility for results. ASM is based on an understanding of how equipment and buildings are used with plants and animals and their products. These processes require an understanding of the biological sciences to produce and maintain top product quality.

Computer skills are taught and used throughout the curriculum. Computers are used to collect and analyze data, and then using that information, to control machines and processes. Other uses involve planning layouts of equipment and buildings, creating graphics for reports, etc.

Agricultural Systems Management students also take several of courses in communications, business management and agricultural sciences, in addition to their specialty courses based in the Agricultural and Biological Engineering Department. The program provides an in-depth technical knowledge for selecting and applying advanced technologies in the food, feed, fiber, and fuel system. Graduates are prepared to solve a wide variety of business and technical problems in a job field that continues to grow.

Agricultural Systems Management students also take several of courses in communications, business management and agricultural sciences, in addition to their specialty courses based in the Agricultural and Biological Engineering Department. The
program provides an in-depth technical knowledge for selecting and applying advanced technologies in the food, feed, fiber, and fuel system. Graduates are prepared to solve a wide variety of business and technical problems in a job field that continues to grow.

In addition to the established Agricultural Systems Management program, students can choose to specialize in one of the following concentrations.

- Data & Information Systems
- Leadership & Management
- Agro-Security

Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top ranked program:

- Multiple opportunities for interaction with faculty in laboratories and in classes
- Student Competitions, Clubs, Global Experiences
- Personalized advising and attention from faculty
- Practical curriculum for industrial careers
- Great opportunities for scholarships and internships
- Numerous departmental scholarships
- Excellent placement record and starting salaries

Watch a video and take a look at some senior projects. We hope to see you in ABE soon!

Agricultural Systems Management Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (50-53 credits)

Required Major Courses (22 credits)

- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- ASM 10500 - Computing Technology With Applications Credits: 3.00
- ASM 21100 - Technical Graphic Communications Credits: 3.00
- ASM 22100 - Career Opportunities Seminar Credits: 1.00
- ASM 22200 - Crop Production Equipment Credits: 3.00
- ASM 33300 - Facilities Planning And Management Credits: 3.00
- ASM 35000 - Safety In Agriculture Credits: 1.00
- ASM 42100 - Senior Seminar Credits: 1.00
- ASM 49400 - Project Planning And Management Credits: 1.00
- ASM 49500 - Agricultural Systems Management Capstone Project Credits: 3.00

ASM (No Concentration) Courses (28-31 credits)

ASM (No Concentration) Courses (12 credits)
• AGEC 31000 - Farm Organization Credits: 3.00 or
• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• ASM 23600 - Environmental Systems Management Credits: 3.00 (satisfies UCC Science, Technology & Society for core) or
• ASM 24500 - Materials Handling And Processing Credits: 3.00
• ASM 34500 - Power Units And Power Trains Credits: 3.00
• ASM 42000 - Electric Power And Controls Credits: 3.00

ASM (No Concentration) Selectives (16-19 credits)

• Agricultural Selective - Credit Hours 13-16
• ASM Major Selective (any ASM course 40000+ level) - Credit Hours: 3.00

Other Departmental/Program Course Requirements (67-70 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11100 - Introduction To Agricultural And Biological Engineering Academic Programs Credits: 0.50
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• AGRY 25500 - Soil Science Credits: 3.00
• MGMT 45500 - Legal Background For Business I Credits: 3.00 or
• AGEc 45500 - Agricultural Law Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• PHYS 21400 - The Nature Of Physics Credits: 3.00 ♦
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
• ECON 25100 - Microeconomics Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) Marketing Selective - Credit Hours: 3.00
• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
© College of Agriculture: Biological Science Selective - Credit Hours: 4.00
© College of Agriculture: Biological Science Selective - Credit Hours: 4.00
© Humanities or Social Science Selective - Credit Hours: 3.00
© Humanities or Social Science Selective - Credit Hours: 3.00
© Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
© Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
© Science, Technology & Society Selective - Credit Hours: 1.00-3.00 (satisfies Science, Technology & Society for core)
© Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
© Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
© Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
Supplemental Information

Selective Courses: Agricultural Systems Management Supplemental Information

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

Transfer Credit Policy

- Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement
- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11100 - Introduction To Agricultural And Biological Engineering Academic Programs Credits: 0.50
- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00♦
- MA 16010 - Applied Calculus I Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Spring 1st Year

- ASM 10500 - Computing Technology With Applications Credits: 3.00♦
- CHM 11200 - General Chemistry Credits: 3.00
- PHYS 21400 - The Nature Of Physics Credits: 3.00♦
- Written Communication Selective - Credit Hours: 3.00-4.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00

15-16 Credits

Fall 2nd Year

- ASM 21100 - Technical Graphic Communications Credits: 3.00
- ASM 22100 - Career Opportunities Seminar Credits: 1.00
- ASM 22200 - Crop Production Equipment Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00♦
- Biological Science Selective - Credit Hours: 4.00

14 Credits

Spring 2nd Year

- AGE 31000 - Farm Organization Credits: 3.00 or
- AGE 33000 - Management Methods For Agricultural Business Credits: 3.00
• ASM 23600 - Environmental Systems Management Credits: 3.00 or
• ASM 24500 - Materials Handling And Processing Credits: 3.00
• AGRY 25500 - Soil Science Credits: 3.00
• ASM 33300 - Facilities Planning And Management Credits: 3.00
• Biological Science Selective - Credit Hours: 4.00

16 Credits

Fall 3rd Year

• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• Agricultural Selective - Credit Hours: 3.00
• Science, Technology, & Society Selective - Credit Hours: 1.00-3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

13-15 Credits

Spring 3rd Year

• ASM 34500 - Power Units And Power Trains Credits: 3.00
• ASM 35000 - Safety In Agriculture Credits: 1.00
• ASM 42000 - Electric Power And Controls Credits: 3.00
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00
  Marketing Selective - Credit Hours: 3.00
• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00 or
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00 or
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

16 Credits

Fall 4th Year

• ASM 42100 - Senior Seminar Credits: 1.00
• ASM 49400 - Project Planning And Management Credits: 1.00
• AGEC 45500 - Agricultural Law Credits: 3.00 or
• MGMT 45500 - Legal Background For Business I Credits: 3.00
• Agricultural Selective - Credit Hours: 3.00
• Agricultural Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

14 Credits
Spring 4th Year

- ASM 49500 - Agricultural Systems Management Capstone Project Credits: 3.00
- Agricultural Selective - Credit Hours: 3.00
- ASM Major Selective (any ASM course 40000+ level) - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Agricultural Selective - Credit Hours: 1.00-4.00

13-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Agricultural Systems Management: AgroSecurity, BS

About the Program

The Agro-security concentration enables students to acquire a higher level of specialization in the principles and practices needed to pursue employment in areas related to the prevention, preparedness, mitigation, response, and recovery related to threats to
agricultural resources from field to table. Agriculture is vulnerable to a wide range of threats with the potential of disrupting both local and national food security. Completion of this concentration will open up opportunities in positions that address loss prevention, risk management, regulatory compliance, and emergency management. Students can still also get the Food and Agribusiness Management Minor

Agricultural Systems Management (ASM) prepares individuals to organize and manage technology in business. The program's emphasis is on planning and directing an industry or business project with responsibility for results. ASM is based on an understanding of how equipment and buildings are used with plants and animals and their products. These processes require an understanding of the biological sciences to produce and maintain top product quality.

Computer skills are taught and used throughout the curriculum. Computers are used to collect and analyze data, and then using that information, to control machines and processes. Other uses involve planning layouts of equipment and buildings, creating graphics for reports, etc.

Agricultural Systems Management students also take several of courses in communications, business management and agricultural sciences, in addition to their specialty courses based in the Agricultural and Biological Engineering Department. The program provides an in-depth technical knowledge for selecting and applying advanced technologies in the food, feed, fiber, and fuel system. Graduates are prepared to solve a wide variety of business and technical problems in a job field that continues to grow.

Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top ranked program:

• Multiple opportunities for interaction with faculty in laboratories and in classes
• Student Competitions, Clubs, Global Experiences
• Personalized advising and attention from faculty
• Practical curriculum for industrial careers
• Great opportunities for internships and undergraduate research
• Numerous departmental scholarships
• Excellent placement record and starting salaries

Watch a video and take a look at some senior projects. We hope to see you in ABE soon!

Agricultural Systems Management Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (50-53 credits)

Required Major Courses (22 credits)

- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- ASM 10500 - Computing Technology With Applications Credits: 3.00
- ASM 21100 - Technical Graphic Communications Credits: 3.00
- ASM 22100 - Career Opportunities Seminar Credits: 1.00
- ASM 22200 - Crop Production Equipment Credits: 3.00
- ASM 33300 - Facilities Planning And Management Credits: 3.00
- ASM 35000 - Safety In Agriculture Credits: 1.00
- ASM 42100 - Senior Seminar Credits: 1.00
• ASM 49400 - Project Planning And Management Credits: 1.00
• ASM 49500 - Agricultural Systems Management Capstone Project Credits: 3.00

AgroSecurity Concentration Courses (28-31 credits)

AgroSecurity Concentration Courses (21 credits)

• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• ASM 23600 - Environmental Systems Management Credits: 3.00 (satisfies STS for core) or
• ASM 34500 - Power Units And Power Trains Credits: 3.00
• ASM 24500 - Materials Handling And Processing Credits: 3.00
• ASM 42000 - Electric Power And Controls Credits: 3.00
• ASM 51000 - Agrosecurity-Emergency Management For Agricultural Production Operations Credits: 3.00
• ASM 51100 - Foundations In Homeland Security Studies Credits: 3.00
• ASM 51200 - Managing Resources and Applications for Homeland Security Credits: 3.00

Agrosecurity Concentration Selectives (7-10 credits)

• Agricultural selectives - Credit Hours: 1.00-4.00
• ASM Major selective (any ASM course 40000+ level) - Credit Hours: 3.00
• Agrosecurity Selective - Credit Hours: 3.00

Other Departmental/Program Course Requirements (67-70 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11100 - Introduction To Agricultural And Biological Engineering Academic Programs Credits: 0.50
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences (BSS) for core) or
• ECON 25100 - Microeconomics Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences (BSS) for core)
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• AGEC 45500 - Agricultural Law Credits: 3.00 or
• MGMT 45500 - Legal Background For Business I Credits: 3.00
• AGRY 25500 - Agricultural Law Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00
• PHYS 21400 - The Nature Of Physics Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
  Marketing Selective - Credit Hours: 3.00
• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
 • College of Agriculture: Biological Science Selective - Credit Hours: 4.00 (see Supplemental Information)
• College of Agriculture: Biological Science Selective - Credit Hours: 4.00 (see Supplemental Information)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Science, Technology & Society Selective - Credit Hours: 1.00-3.00 (satisfies Science, Technology, & Society for core)
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Supplemental Information

Selective Courses: Agricultural Systems Management Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

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University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11100 - Introduction To Agricultural And Biological Engineering Academic Programs Credits: 0.50
- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00
- Oral Communication Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00

16 Credits

Spring 1st Year

- ASM 10500 - Computing Technology With Applications Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00
- PHYS 21400 - The Nature Of Physics Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

15-16 Credits

Fall 2nd Year

- ASM 21100 - Technical Graphic Communications Credits: 3.00
- ASM 22100 - Career Opportunities Seminar Credits: 1.00
- ASM 22200 - Crop Production Equipment Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- College of Agriculture: Biological Science Selective - Credit Hours: 4.00

14 Credits

Spring 2nd Year

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- ASM 24500 - Materials Handling And Processing Credits: 3.00
- ASM 33300 - Facilities Planning And Management Credits: 3.00
- College of Agriculture: Biological Science Selective - Credit Hours: 4.00

16 Credits

Fall 3rd Year

- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- ASM 23600 - Environmental Systems Management Credits: 3.00 or
• ASM 34500 - Power Units And Power Trains **Credits:** 3.00
  *AgroSecurity Selective* - Credit Hours: 3.00
• ASM 59000 - Special Problems **Credits:** 1.00 to 6.00 (3.00 credits) or
• NRES 38010 - Hazardous Waste Handling **Credits:** 3.00 or
• TLI 35520 - Organization Development And Change **Credits:** 3.00
• Science, Technology & Society Selective - Credit Hours: 1.00-3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

**13-15 Credits**

**Spring 3rd Year**

• AGEC 35200 - Quantitative Techniques For Firm Decision Making **Credits:** 3.00
• ASM 35000 - Safety In Agriculture **Credits:** 1.00
• ASM 42000 - Electric Power And Controls **Credits:** 3.00
• MGMT 20000 - Introductory Accounting **Credits:** 3.00 or
• MGMT 21200 - Business Accounting **Credits:** 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

**16 Credits**

**Fall 4th Year**

• ASM 42100 - Senior Seminar **Credits:** 1.00
• ASM 49400 - Project Planning And Management **Credits:** 1.00
• ASM 51000 - Agrosecurity-Emergency Management For Agricultural Production Operations **Credits:** 3.00
• ASM 51100 - Foundations in Homeland Security Studies **Credits:** 3.00
• AGEC 45500 - Agricultural Law **Credits:** 3.00 or
• MGMT 45500 - Legal Background For Business I **Credits:** 3.00
  *Marketing Selective* - Credit Hours: 3.00
• AGEC 22000 - Economics Of Agricultural Markets **Credits:** 3.00 or
• AGEC 32100 - Principles Of Commodity Marketing **Credits:** 3.00 or
• AGEC 32700 - Principles Of Food And Agribusiness Marketing **Credits:** 3.00

**14 Credits**

**Spring 4th Year**

• ASM 49500 - Agricultural Systems Management Capstone Project **Credits:** 3.00
• ASM 51200 - Managing Resources and Applications for Homeland Security **Credits:** 3.00
• Major Selective (any ASM course 40000+ level) - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Agricultural Selective - Credit Hours: 1.00-4.00

**13-16 Credits**
Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Agricultural Systems Management: Data and Information Systems, BS

About the Program

The Data and Information Systems concentration supports the growing data and information need in agriculture and is structured so that students can readily obtain the Computer and Information Systems minor. Industry is seeking graduates who understand cropping and animal agriculture; they also wish they had stronger information technology skills such as programming, app development, and data handling. This concentration addresses this need and complements the facility and equipment technology focus of the ASM major. Students will still also get the Food and Agribusiness Management Minor.

Agricultural Systems Management (ASM) prepares individuals to organize and manage environmentally sound, technology-based businesses. The program's emphasis is on planning and directing an industry or business project with responsibility for results. ASM is based on an understanding of how equipment and buildings are used with plants and animals and their products. These processes require an understanding of the biological sciences to produce and maintain top product quality.

Computer skills are taught and used throughout the curriculum. Computers are used to collect and analyze data, and then using that information, to control machines and processes. Other uses involve planning layouts of equipment and buildings, creating
graphics for reports, etc. Agricultural Systems Management students also take several of courses in communications, business management and agricultural sciences, in addition to their specialty courses based in the Agricultural and Biological Engineering Department. The program provides an in-depth technical knowledge for selecting and applying advanced technologies in the food, feed, fiber, and fuel system. Graduates are prepared to solve a wide variety of business and technical problems in a job field that continues to grow.

Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top ranked program:

- Multiple opportunities for interaction with faculty in laboratories and in classes
- Student Competitions, Clubs, Global Experiences
- Personalized advising and attention from faculty
- Practical curriculum for industrial careers
- Great opportunities for internships and undergraduate research.
- Numerous departmental scholarships
- Excellent placement record and starting salaries

Watch a video and take a look at some senior projects. We hope to see you in ABE soon!

Agricultural Systems Management Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (50-53 credits)

Required Major Courses (22 credits)

- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- ASM 10500 - Computing Technology With Applications Credits: 3.00
- ASM 21100 - Technical Graphic Communications Credits: 3.00
- ASM 22100 - Career Opportunities Seminar Credits: 1.00
- ASM 22200 - Crop Production Equipment Credits: 3.00
- ASM 33300 - Facilities Planning And Management Credits: 3.00
- ASM 35000 - Safety In Agriculture Credits: 1.00
- ASM 42100 - Senior Seminar Credits: 1.00
- ASM 49400 - Project Planning And Management Credits: 1.00
- ASM 49500 - Agricultural Systems Management Capstone Project Credits: 3.00

Required Courses - Data and Information Systems Concentration (28-31 credits)

Data and Information Systems Concentration Courses (15 credits)

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- ASM 54000 - Geographic Information System Application Credits: 3.00
- CNIT 15501 - Introduction To Software Development Concepts Credits: 3.00
- CNIT 18000 - Introduction To Systems Development Credits: 3.00
Data and Informational Concentration Selectives (13-16 credits)

- Agricultural Selectives - Credit Hours: 1.00-4.00
- ASM Major Selective (any ASM course) - Credit Hours: 9.00
- CNIT Selective - Credit Hours: 3.00

Other Departmental/Program Course Requirements (67-70 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11100 - Introduction To Agricultural And Biological Engineering Academic Programs Credits: 0.50
- AGE 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core & COA Economics selective) or
- ECON 25100 - Microeconomics Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core & COA Economics selective)
- AGE 33100 - Principles Of Industrial Selling Credits: 3.00
- AGE 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
- AGE 45500 - Agricultural Law Credits: 3.00 or
- MGMT 45500 - Legal Background For Business I Credits: 3.00
- AGY 25500 - Soil Science Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- MGMT 20000 - Introductory Accounting Credits: 3.00 or
- MGMT 21200 - Business Accounting Credits: 3.00
- PHYS 21400 - The Nature Of Physics Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core) Marketing Selective - Credit Hours: 3.00
- AGE 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGE 32100 - Principles Of Commodity Marketing Credits: 3.00
- AGE 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- Biological Science Selective - Credit Hours: 4.00
- Biological Science Selective - Credit Hours: 4.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Science, Technology & Society Selective - Credit Hours: 1.00-3.00 (satisfies Science, Technology & Society for core)
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Supplemental Information

Selective Courses: Agricultural Systems Management Supplemental Information
College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

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- Science #1 (SCI)
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- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement
The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11100 - Introduction To Agricultural And Biological Engineering Academic Programs Credits: 0.50
- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or ECON 25100 - Microeconomics Credits: 3.00
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Spring 1st Year

- ASM 10500 - Computing Technology With Applications Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00
- PHYS 21400 - The Nature Of Physics Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

15-16 Credits

Fall 2nd Year

- ASM 21100 - Technical Graphic Communications Credits: 3.00
• ASM 22100 - Career Opportunities Seminar Credits: 1.00  
• ASM 22200 - Crop Production Equipment Credits: 3.00  
• CNIT 18000 - Introduction To Systems Development Credits: 3.00  
• College of Agriculture: Biological Science Selective - Credit Hours: 4.00

14 Credits

Spring 2nd Year

• AGRY 25500 - Soil Science Credits: 3.00  
• CNIT 15501 - Introduction To Software Development Concepts Credits: 3.00  
• STAT 30100 - Elementary Statistical Methods Credits: 3.00  
• ASM Major Selective (any ASM course) - Credit Hours: 3.00  
• College of Agriculture: Biological Science Selective - Credit Hours: 4.00

16 Credits

Fall 3rd Year

• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00  
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00  
• MGMT 20000 - Introductory Accounting Credits: 3.00 or  
• MGMT 21200 - Business Accounting Credits: 3.00  
• ASM Major Selective (any ASM course) - Credit Hours: 3.00  
  Marketing Selective - Credit Hours: 3.00  
• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00 or  
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00 or  
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00

15 Credits

Spring 3rd Year

• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00  
• ASM 33300 - Facilities Planning And Management Credits: 3.00  
• ASM 35000 - Safety In Agriculture Credits: 1.00  
• CNIT 25501 - Object-Oriented Programming Introduction Credits: 3.00  
• Humanities or Social Science Selective - Credit Hours: 3.00  
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

16 Credits

Fall 4th Year

• ASM 42100 - Senior Seminar Credits: 1.00
• ASM 49400 - Project Planning And Management Credits: 1.00
• ASM 54000 - Geographic Information System Application Credits: 3.00
• AGEC 45500 - Agricultural Law Credits: 3.00 or
• MGMT 45500 - Legal Background For Business I Credits: 3.00
  CNIT Selective - Credit Hours: 3.00
• CNIT 27200 - Database Fundamentals Credits: 3.00 or
• CNIT 28000 - Systems Analysis And Design Methods Credits: 3.00 or
• CNIT 31500 - Systems Programming Credits: 3.00 or
• CNIT 32500 - Object-Oriented Application Development Credits: 3.00 or
• CNIT 35500 - Mobile Programming Credits: 3.00
• Science, Technology & Society Selective - Credit Hours: 1.00-3.00

12-14 Credits

Spring 4th Year

• ASM 49500 - Agricultural Systems Management Capstone Project Credits: 3.00
• ASM Major Selective (any ASM course) - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Agricultural Selectives - Credit Hours: 1.00-4.00

13-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

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**Agricultural Systems Management: Leadership and Management, BS**

**About the Program**

The Leadership & Management concentration more adequately prepares graduates for supervision and leadership in the technology arena of agribusiness. The 4 Organizational Leadership and Supervision (or Technology Leadership and Innovation) courses lead to the Organizational and Leadership Supervision minor for added credentials in this area. Students will still also get the Food and Agribusiness Management Minor.

Agricultural Systems Management (ASM) prepares individuals to organize and manage environmentally sound, technology-based businesses. The program's emphasis is on planning and directing an industry or business project with responsibility for results. ASM is based on an understanding of how equipment and buildings are used with plants and animals and their products. These processes require an understanding of the biological sciences to produce and maintain top product quality.

Computer skills are taught and used throughout the curriculum. Computers are used to collect and analyze data, and then using that information, to control machines and processes. Other uses involve planning layouts of equipment and buildings, creating graphics for reports, etc.

Agricultural Systems Management students also take several of courses in communications, business management and agricultural sciences, in addition to their specialty courses based in the Agricultural and Biological Engineering Department. The program provides an in-depth technical knowledge for selecting and applying advanced technologies in the food, feed, fiber, and fuel system. Graduates are prepared to solve a wide variety of business and technical problems in a job field that continues to grow.

**Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top ranked program:**

- Multiple opportunities for interaction with faculty in laboratories and in classes
- Student Competitions, Clubs, Global Experiences
- Personalized advising and attention from faculty
- Practical curriculum for industrial careers
- Great opportunities for internships and undergraduate research.
- Numerous departmental scholarships
- Excellent placement record and starting salaries

Watch a video and take a look at some senior projects. We hope to see you in ABE soon!

**Agricultural Systems Management Major Change (CODO) Requirements**

**Degree Requirements**

**120 Credits Required**
Departmental/Program Major Courses (50-53 credits)

Required Major Courses (22 credits)

- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- ASM 10500 - Computing Technology With Applications Credits: 3.00
- ASM 21100 - Technical Graphic Communications Credits: 3.00
- ASM 22100 - Career Opportunities Seminar Credits: 1.00
- ASM 22200 - Crop Production Equipment Credits: 3.00
- ASM 33300 - Facilities Planning And Management Credits: 3.00
- ASM 35000 - Safety In Agriculture Credits: 1.00
- ASM 42100 - Senior Seminar Credits: 1.00
- ASM 49400 - Project Planning And Management Credits: 1.00
- ASM 49500 - Agricultural Systems Management Capstone Project Credits: 3.00

Leadership and Management Concentration Required Courses (28-31 credits)

Leadership and Management Concentration Courses

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
- TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00

Leadership and Management Concentration Selectives

- Agricultural Selective - Credit Hours: 1.00-4.00
- ASM Major Selective (any ASM course) - Credit Hours: 9.00
- ASM Selective (any course 40000+ level) - Credit Hours: 3.00
- Leadership and Management Selective - Credit Hours: 6.00

Other Departmental/Program Course Requirements (67-70 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11100 - Introduction To Agricultural And Biological Engineering Academic Programs Credits: 0.50
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core & COA Economics selective) or
- ECON 25100 - Microeconomics Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Science & COA Economics selective)
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
- AGEC 45500 - Agricultural Law Credits: 3.00 or
- MGMT 45500 - Legal Background For Business I Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 requirement for core)
- CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 requirement for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00
• PHYS 21400 - The Nature Of Physics Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• Marketing Selective - Credit Hours: 3.00
• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
• Biological Science Selective - Credit Hours: 4.00
• Biological Science Selective - Credit Hours: 4.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Science, Technology & Society Selective - Credit Hours: 1.00-3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Supplemental List

Agricultural Systems Management Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements
2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11100 - Introduction To Agricultural And Biological Engineering Academic Programs Credits: 0.50
- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00
- MA 16010 - Applied Calculus I **Credits: 3.00**
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness **Credits: 3.00** or
- ECON 25100 - Microeconomics **Credits: 3.00**
- Oral Communication Selective - Credit Hours: 3.00

**16 Credits**

**Spring 1st Year**

- ASM 10500 - Computing Technology With Applications **Credits: 3.00**
- CHM 11200 - General Chemistry **Credits: 3.00**
- PHYS 21400 - The Nature Of Physics **Credits: 3.00**
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

**15-16 Credits**

**Fall 2nd Year**

- ASM 21100 - Technical Graphic Communications **Credits: 3.00**
- ASM 22100 - Career Opportunities Seminar **Credits: 1.00**
- ASM 22200 - Crop Production Equipment **Credits: 3.00**
- STAT 30100 - Elementary Statistical Methods **Credits: 3.00**
- College of Agriculture Biological Science Selective - Credit Hours: 4.00

**14 Credits**

**Spring 2nd Year**

- AGEC 33000 - Management Methods For Agricultural Business **Credits: 3.00**
- AGRY 25500 - Soil Science **Credits: 3.00**
- ASM 33300 - Facilities Planning And Management **Credits: 3.00**
- ASM Selective (any ASM course) - Credit Hours: 3.00
- College of Agriculture Biological Science Selective - Credit Hours: 4.00

**16 Credits**

**Fall 3rd Year**

- AGEC 33100 - Principles Of Industrial Selling **Credits: 3.00**
- AGEC 22000 - Economics Of Agricultural Markets **Credits: 3.00** or
- AGEC 32100 - Principles Of Commodity Marketing **Credits: 3.00** or
- AGEC 32700 - Principles Of Food And Agribusiness Marketing **Credits: 3.00**
- ASM Selective (any ASM course) - Credit Hours: 3.00
• Science, Technology & Society Selective - Credit Hours: 1.00-3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

13-15 Credits

Spring 3rd Year

• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• ASM 35000 - Safety In Agriculture Credits: 1.00
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00
• TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

16 Credits

Fall 4th Year

• ASM 42100 - Senior Seminar Credits: 1.00
• ASM 49400 - Project Planning And Management Credits: 1.00
• TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00
• AGEC 45500 - Agricultural Law Credits: 3.00 or
• MGMT 45500 - Legal Background For Business I Credits: 3.00
• ASM Selective (any ASM course) - Credit Hours: 3.00
• ASM Selective (any ASM course 40000+ level) - Credit Hours: 3.00

14 Credits

Spring 4th Year

• ASM 49500 - Agricultural Systems Management Capstone Project Credits: 3.00
• Leadership and Management Selective - Credit Hours 3.00
• Leadership and Management Selective - Credit Hours 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Agricultural Selective - Credit Hours: 1.00-4.00

13-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses
World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

**Critical Course**

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

**Disclaimer**

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Bachelor of Science in Agricultural Engineering**

**Agricultural Engineering, BSAGE**

**About the Program**

Agricultural Engineers apply their knowledge of agricultural systems, natural resources, and engineering to equipment design and assure environmental compatibility of practices used by production agriculture. The Agricultural Engineering curriculum offers great breadth, with a major choice in machine systems engineering. Subject areas include computer-aided engineering, fluid power, finite element analysis, natural resource conservation, and engineering properties of biological materials. Excellent career opportunities exist in product engineering, equipment research and design, facilities design, and engineering management. Practical applications in lab intensive classes (every ABE 3-credit hour class has a lab) and significant opportunities to be involved in clubs (AgGrowBot, 1/4-Scale Tractor, PUP, ASABE Robotics) makes this a great program for entrepreneurs and start-up engineering companies. Students in this program earn a Bachelor of Science in Agricultural Engineering, (BSE-AGE).

Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top ranked program:

- Multiple opportunities for interaction with faculty in laboratories and in classes
- Student Competitions, Clubs, Global Experiences
- Personalized advising and attention from faculty
- Practical curriculum for industrial careers
• Great opportunities for scholarships and internships

• Excellent placement record and starting salaries

Watch a video and take a look at some senior projects. We hope to see you in ABE soon!

Current Students - Click here for advising and degree requirement resources.

Prospective Students - Click here to learn more and schedule a visit.

The Agricultural Engineering program is accredited by the Engineering Accreditation Commission of ABET.

Agricultural Engineering Major Change (CODO) Requirements

Degree Requirements

128 Credits Required

Pre-ABE Requirements (29-39 credits)

All courses in this area must have a C- or higher.

*Upon successful completion of Pre-ABE curriculum, students are eligible to enter their preferred engineering major within ABE. For alternative paths to ABE majors, please visit First-Year Engineering and/or speak with an ABE advisor.

Requirement #1: Intro to Engineering I - Credit Hours: 2.00-4.00
• ENGR 13100 - Transforming Ideas To Innovation I Credits: 2.00
  OR
• ENGR 16100 - Honors Introduction To Innovation And The Physical Science Of Engineering Design I Credits: 4.00
  OR
• EPCS 11100 - First Year Participation In EPICS I Credits: 1.00 and
• EPCS 12100 - First Year Participation In EPICS II Credits: 1.00
  OR
• VIP 17911 - First Year Participation In Vertically Integrated Projects (VIP) I Credits: 1.00 and
• VIP 17912 - First Year Participation In Vertically Integrated Projects (VIP) II Credits: 1.00
  or
• ENGR 13000 - Transforming Ideas To Innovation, EPICS/VIP Credits: 4.00

Requirement #2: Intro to Engineering II - Credit Hours: 2.00-4.00
• ENGR 13200 - Transforming Ideas To Innovation II Credits: 2.00
  or
• ENGR 13300 - Transforming Ideas To Innovation, EPICS/VIP Credits: 2.00
  or
• ENGR 16200 - Honors Introduction To Innovation And The Physical Science Of Engineering Design II Credits: 4.00 or
  ENGR 13000 - Transforming Ideas To Innovation, EPICS/VIP

Requirement #3: Calculus I - Credit Hours: 4.00-5.00 (satisfies Quantitative Reasoning for core)
• MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00 or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00

Requirement #4: Calculus II - Credit Hours: 4.00-5.00
• MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00 or
• MA 16600 - Analytic Geometry And Calculus II Credits: 4.00

Requirement #5: Chemistry I - Credit Hours: 4.00-6.00 (satisfies Science #1 for core)
• CHM 11500 - General Chemistry Credits: 4.00
  OR
• CHM 11510 - General Chemistry I Credits: 3.00
  and
• CHM 11520 - General Chemistry I - Laboratory Credits: 1.00 or
• CHM 11530 - General Chemistry I - Virtual Laboratory Credits: 1.00
  OR
• CHM 11100 - General Chemistry Credits: 3.00 and
• CHM 11200 - General Chemistry Credits: 3.00

Requirement #6: Physics - Credit Hours: 4.00 (satisfies Science #2 for core)
• PHYS 17200 - Modern Mechanics Credits: 4.00
  OR
• ENGR 16100 - Honors Introduction To Innovation And The Physical Science Of Engineering Design I and
• ENGR 16200 - Honors Introduction To Innovation And The Physical Science Of Engineering Design II

Requirement #7: Pre-ABE First-Year Engineering Selective - Credit Hours: 3.00-4.00
Note: To maintain degree progression:
• Biological Engineering majors should take CHM 11600
• Agricultural and Environmental and Natural Resources Engineering majors should take CS 15900 or CS 17700.
• CS 15900 - C Programming Credits: 3.00 or
• CS 17700 - Programming With Multimedia Objects Credits: 4.00 or
• CHM 11600 - General Chemistry

Requirement #8: Written and Oral Communication - Credit Hours: 6.00-7.00 Two of the following course options:
• Written Communication - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Oral Communication - Credit Hours: 3.00 (satisfies Oral Communication for core)
• SCLA 11000 - Language And Cultural Exchange I: Self In Context Credits: 3.00
• SCLA 11100 - Language And Cultural Exchange II: Texts And Contexts Credits: 3.00

Departmental/Program Major Courses (34 credits)

Required Major Courses (34 credits)

• ABE 20500 - Computations For Engineering Systems Credits: 3.00
• ABE 21000 - Thermodynamics Principles Of Engineering And Biological Systems Credits: 3.00
• ABE 29000 - Sophomore Seminar Credits: 1.00 (satisfies Science, Technology, & Society for core)
• ABE 30500 - Physical Properties Of Biological Materials Credits: 3.00
• ABE 31400 - Design Of Electronic Systems Credits: 3.00
• ABE 32000 - Solid Modeling, Simulation, And Analysis Credits: 3.00
• ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
• ABE 33000 - Design Of Machine Components Credits: 3.00
• ABE 43500 - Hydraulic Control Systems For Mobile Equipment Credits: 3.00
• ABE 45000 - Computational Modeling And Data Analysis In Agricultural Engineering Credits: 3.00
• ABE 48400 - Project Planning And Management Credits: 1.00
• ABE 48600 - Agricultural Engineering Design Credits: 3.00 (Capstone)
• ABE 49000 - Professional Practice In Agricultural And Biological Engineering Credits: 1.00

Other Departmental/Program Course Requirements (91-95 credits)

Click here for Pre-Agricultural and Biological Engineering Requirements

• AGRY 25500 - Soil Science Credits: 3.00
• ENGR 13100 - Transforming Ideas To Innovation I Credits: 2.00 (satisfies Information Literacy for core)
• ENGR 13200 - Transforming Ideas To Innovation II Credits: 2.00
• CE 34000 - Hydraulics Credits: 3.00 and
  • CE 34300 - Elementary Hydraulics Laboratory Credits: 1.00
OR
• ME 30800 - Fluid Mechanics Credits: 3.00 and
• ME 30801 - Fluid Mechanics Laboratory Credits: 1.00
• CHM 11500 - General Chemistry Credits: 4.00 (satisfies Science #1 for core)
  Programming or Chem II Selective
• CHM 11600 - General Chemistry Credits: 4.00 or
• CS 15900 - C Programming Credits: 3.00 or
• CS 17700 - Programming With Multimedia Objects Credits: 4.00 (Preferred)
• MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00 (satisfies Quantitative Reasoning for core) or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00 (satisfies Quantitative Reasoning for core)
• MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00 or
• MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
• MA 26100 - Multivariate Calculus Credits: 4.00
• MA 26200 - Linear Algebra And Differential Equations Credits: 4.00
• ME 27000 - Basic Mechanics I Credits: 3.00
• ME 27400 - Basic Mechanics II Credits: 3.00
• NUCL 27300 - Mechanics Of Materials Credits: 3.00
• PHYS 17200 - Modern Mechanics Credits: 4.00 (satisfies Science #2 for core)
• PHYS 24100 - Electricity And Optics Credits: 3.00
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Agricultural Selective - Credit Hours: 3.00
• Biological Science Selective - Credit Hours: 4.00
• Biological Science Selective - Credit Hours: 4.00
• Engineering Technical Selective - Credit Hours: 3.00
• Engineering Technical Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- Written and Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Elective (0-3 credits)

- Elective - Credit Hours: 0.00-3.00

Supplemental Information

Click here for Agricultural Engineering Supplemental Information

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

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- 2.0 GPA required for Bachelor of Science degree.

Transfer Credit Policy
• Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer credit courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample First-Year Engineering Plan of Study

Fall 1st Year

• Requirement #1 - Intro to Engineering - Credit Hours: 2.00-4.00
- Requirement #3 - Calculus I - Credit Hours: 4.00-5.00
- Requirement #5 - Chemistry - Credit Hours: 4.00-6.00
- Requirement #8 - Written or Oral Communication - Credit Hours: 3.00-4.00

13-19 Credits

Spring 1st Year

- Requirement #2 - Intro to Engineering II - Credit Hours: 2.00-4.00
- Requirement #4 - Calculus II - Credit Hours: 4.00-5.00
- Requirement #6 - Physics - Credit Hours: 4.00
- Requirement #7 - First-Year Engineering Selective - Credit Hours: 3.00-4.00
- Requirement #8 - Written or Oral Communication - Credit Hours: 3.00-4.00

16-21 Credits

Sample 4-Year Plan

Fall 2nd Year

- ABE 20500 - Computations For Engineering Systems Credits: 3.00
- ABE 29000 - Sophomore Seminar Credits: 1.00
- MA 26100 - Multivariate Calculus Credits: 4.00
- ME 27000 - Basic Mechanics I Credits: 3.00
- PHYS 24100 - Electricity And Optics Credits: 3.00
- Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00

17 Credits

Spring 2nd Year

- ABE 21000 - Thermodynamics Principles Of Engineering And Biological Systems Credits: 3.00
- MA 26200 - Linear Algebra And Differential Equations Credits: 4.00
- ME 27400 - Basic Mechanics II Credits: 3.00
- NUCL 27300 - Mechanics Of Materials Credits: 3.00
- College of Agriculture: Biological Science Selective - Credit Hours: 4.00

17 Credits
Fall 3rd Year

- ABE 30500 - Physical Properties Of Biological Materials Credits: 3.00
- ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- AGRY 25500 - Soil Science Credits: 3.00
- CE 34000 - Hydraulics Credits: 3.00 and
- CE 34300 - Elementary Hydraulics Laboratory Credits: 1.00
  OR
- ME 30800 - Fluid Mechanics Credits: 3.00 and
- ME 30801 - Fluid Mechanics Laboratory Credits: 1.00
- Agricultural Selective - Credit Hours: 3.00

17 Credits

Spring 3rd Year

- ABE 31400 - Design Of Electronic Systems Credits: 3.00
- ABE 32000 - Solid Modeling, Simulation, And Analysis Credits: 3.00
- ABE 33000 - Design Of Machine Components Credits: 3.00
- College of Agriculture: Biological Science Selective - Credit Hours: 4.00
- Humanities or Social Science Selective - Credit Hours: 3.00

16 Credits

Fall 4th Year

- ABE 43500 - Hydraulic Control Systems For Mobile Equipment Credits: 3.00
- ABE 45000 - Computational Modeling And Data Analysis In Agricultural Engineering Credits: 3.00
- ABE 48400 - Project Planning And Management Credits: 1.00
- ABE 49000 - Professional Practice In Agricultural And Biological Engineering Credits: 1.00
- Engineering Technical Selective - Credit Hours: 3.00
- Written and Oral Communication Selective (20000+level) - Credit Hours: 3.00

14 Credits

Spring 4th Year

- ABE 48600 - Agricultural Engineering Design Credits: 3.00
- Engineering Technical Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Elective - Credit Hours: 1.00-3.00

13-15 Credits
Environmental and Natural Resources Engineering, BSAGE

About the Program

Environmental and Natural Resources Engineering prepares engineers to understand environmental and economic sustainability challenges. You learn about ecosystem processes (the water cycle, nutrient transformation processes, and biological systems), how human activities such as agriculture affect these complex systems, and how to design sustainable solutions. You will also gain the background in chemistry and biology necessary to understand the influences of contaminants on the environment. Basic engineering principles, as well as some of the newest technological approaches such as geographical information systems, finite element analysis, sensor design, hydrologic modeling, and soil and water remediation are applied to solve challenges related to soil and plant environments, surface and ground water quality, air quality, animal environments, and food safety.

Environmental and Natural Resources Engineering Focus Areas

- **Water and Soil Conservation**: Ensuring adequate supplies of clean water through sustainable methods by integrating environmental processes into engineering design (examples include: rain gardens, constructed wetlands, water and sediment control structures, and stream restoration).
- **Sensor Technology for Environmental Monitoring**: Integration of sensors and control systems into machinery and control systems for environmental monitoring (examples include: Unmanned Aircraft Systems (UAS), and self-driving equipment monitoring soil and moisture conditions in real time).
- **Simulation and Forecasting of Environmental Processes**: Using numerical simulation models to predict changes to flood and drought frequency, stream flow, and water quality due to land use, land management and climate change.
- **Resource Management**: Animal waste treatment and management, drainage system design and water quality management and irrigation system design and water management.
• **Systems Approach for Environmental Resource Management:** Applying tools and techniques such as life cycle analysis and other modeling approaches to study systems level environmental impacts associated with resource management focused on establishing connections between natural systems and agricultural-based industries

Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top ranked program:

• Multiple opportunities for interaction with faculty in laboratories and in classes
• Student Competitions, Clubs, Global Experiences
• Personalized advising and attention from faculty
• Practical curriculum for industrial careers
• Great opportunities for internships and undergraduate research.
• Numerous departmental scholarships
• Excellent placement record and starting salaries

Watch a video and take a look at some senior projects. We hope to see you in ABE soon!

Current Students - Click here for advising and degree requirement resources.

Prospective Students - Click here to learn more and schedule a visit.

The Environmental and Natural Resources Engineering program is accredited by the Engineering Accreditation Commission of ABET.

Department of Agriculture and Biological Engineering

Environmental and Natural Resources Engineering Major Change (CODO) Requirements

**Degree Requirements**

**128 Credits Required**

**Pre-ABE Requirements (29-39 credits)**

All courses in this area must have a C- or higher.

*Upon successful completion of Pre-ABE curriculum, students are eligible to enter their preferred engineering major within ABE. For alternative paths to ABE majors, please visit First-Year Engineering and/or speak with an ABE advisor.*

**Requirement #1: Intro to Engineering I** - Credit Hours: 2.00-4.00

• ENGR 13100 - Transforming Ideas To Innovation I Credits: 2.00
  OR
• ENGR 16100 - Honors Introduction To Innovation And The Physical Science Of Engineering Design I Credits: 4.00
  OR
• EPCS 11100 - First Year Participation In EPICS I Credits: 1.00
  OR
• EPCS 12100 - First Year Participation In EPICS II Credits: 1.00
  OR
• VIP 17911 - First Year Participation In Vertically Integrated Projects (VIP) I Credits: 1.00
  OR
• VIP 17912 - First Year Participation In Vertically Integrated Projects (VIP) II Credits: 1.00
ENGR 13000 - Transforming Ideas To Innovation, EPICS/VIP Credits: 4.00

Requirement #2: Intro to Engineering II - Credit Hours: 2.00-4.00
- ENGR 13200 - Transforming Ideas To Innovation II Credits: 2.00 or
- ENGR 13300 - Transforming Ideas To Innovation, EPICS/VIP Credits: 2.00 or
- ENGR 16200 - Honors Introduction To Innovation And The Physical Science Of Engineering Design II Credits: 4.00 or
- ENGR 13000 - Transforming Ideas To Innovation, EPICS/VIP

Requirement #3: Calculus I - Credit Hours: 4.00-5.00 (satisfies Quantitative Reasoning for core)
- MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00 or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00

Requirement #4: Calculus II - Credit Hours: 4.00-5.00
- MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00 or
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00

Requirement #5: Chemistry I - Credit Hours: 4.00-6.00 (satisfies Science #1 for core)
- CHM 11500 - General Chemistry Credits: 4.00
- CHM 11510 - General Chemistry I Credits: 3.00
  and
- CHM 11520 - General Chemistry I - Laboratory Credits: 1.00 or
- CHM 11530 - General Chemistry I - Virtual Laboratory Credits: 1.00
  OR
- CHM 11100 - General Chemistry Credits: 3.00 and
- CHM 11200 - General Chemistry Credits: 3.00

Requirement #6: Physics - Credit Hours: 4.00 (satisfies Science #2 for core)
- PHYS 17200 - Modern Mechanics Credits: 4.00
  OR
- ENGR 16100 - Honors Introduction To Innovation And The Physical Science Of Engineering Design I and
- ENGR 16200 - Honors Introduction To Innovation And The Physical Science Of Engineering Design II

Requirement #7: Pre-ABE First-Year Engineering Selective - Credit Hours: 3.00-4.00
  Note: To maintain degree progression:
- Biological Engineering majors should take CHM 11600
- Agricultural and Environmental and Natural Resources Engineering majors should take CS 15900 or CS 17700.
- CS 15900 - C Programming Credits: 3.00 or
- CS 17700 - Programming With Multimedia Objects Credits: 4.00 or
- CHM 11600 - General Chemistry

Requirement #8: Written and Oral Communication - Credit Hours: 6.00-7.00 Two of the following course options:
- Written Communication - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- Oral Communication - Credit Hours: 3.00 (satisfies Oral Communication for core)
- SCLA 11000 - Language And Cultural Exchange I: Self In Context Credits: 3.00
- SCLA 11100 - Language And Cultural Exchange II: Texts And Contexts Credits: 3.00

Departmental/Program Major Courses (25 credits)
Required Major Courses (25 credits)

- ABE 20500 - Computations For Engineering Systems Credits: 3.00
- ABE 21000 - Thermodynamics Principles Of Engineering And Biological Systems Credits: 3.00
- ABE 29000 - Sophomore Seminar Credits: 1.00 (satisfies Science, Technology, and Society for core)
- ABE 30500 - Physical Properties Of Biological Materials Credits: 3.00
- ABE 31400 - Design Of Electronic Systems Credits: 3.00
- ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- ABE 42500 - Water Quality Engineering Credits: 3.00 or
- ABE 42600 - Ecological Restoration Engineering Credits: 3.00
- ABE 48400 - Project Planning And Management Credits: 1.00
- ABE 48600 - Agricultural Engineering Design Credits: 3.00 (Capstone)
- ABE 49000 - Professional Practice In Agricultural And Biological Engineering Credits: 1.00

Other Departmental/Program Requirements (101-105 credits)

*Upon successful completion of Pre-ABE curriculum, students are eligible to enter their preferred engineering major within ABE. For alternative paths to ABE majors, please visit First-Year Engineering and/or speak with an ABE advisor.

Other Departmental Courses (101-105 credits)

**First Year Engineering Course Options** - These courses are required for the Environmental & Natural Resource Engineering Major. They may be taken in First Year Engineering. If they are not taken then, they will need to be incorporated in the six (6) remaining semesters prior to graduation.

- CHM 11500 - General Chemistry Credits: 4.00
- CS 15900 - C Programming Credits: 3.00 or
- CS 17700 - Programming With Multimedia Objects Credits: 4.00
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00 or
- MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00 or
- MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00
- PHYS 17200 - Modern Mechanics Credits: 4.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

- AGRY 25500 - Soil Science Credits: 3.00
- CE 38300 - Geotechnical Engineering I Credits: 3.00
- CE 34000 - Hydraulics Credits: 3.00 and
- CE 34300 - Elementary Hydraulics Laboratory Credits: 1.00
- CHM 11600 - General Chemistry Credits: 4.00
- MA 26100 - Multivariate Calculus Credits: 4.00
- MA 26200 - Linear Algebra And Differential Equations Credits: 4.00
- ME 27000 - Basic Mechanics I Credits: 3.00
- ME 27400 - Basic Mechanics II Credits: 3.00
- PHYS 24100 - Electricity And Optics Credits: 3.00
- Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Agricultural Selective - Credit Hours: 3.00
• College of Agriculture Biological Science Selective - Credit Hours: 4.00
• College of Agriculture Biological Science Selective - Credit Hours: 4.00
• Engineering Technical Selective - Credit Hours: 3.00
• Engineering Technical Selective - Credit Hours: 3.00
• Environmental and Natural Resources Engineering Technical Selective - Credit Hours: 3.00
• Environmental and Natural Resources Engineering Technical Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Written and Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (0-2 credits)

• Electives - Credit Hours: 0.00-2.00

Supplemental List

Click here for Environmental and Natural Resources Engineering Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy
Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).
Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample First-Year Engineering Plan of Study

Fall 1st Year

- Requirement #1 - Intro to Engineering - Credit Hours: 2.00-4.00
- Requirement #3 - Calculus I - Credit Hours: 4.00-5.00
- Requirement #5 - Chemistry - Credit Hours: 4.00-6.00
- Requirement #8 - Written or Oral Communication - Credit Hours: 3.00-4.00

13-19 Credits

Spring 1st Year

- Requirement #2 - Intro to Engineering II - Credit Hours: 2.00-4.00
- Requirement #4 - Calculus II - Credit Hours: 4.00-5.00
- Requirement #6 - Physics - Credit Hours: 4.00
- Requirement #7 - First-Year Engineering Selective - Credit Hours: 3.00-4.00
- Requirement #8 - Written or Oral Communication - Credit Hours: 3.00-4.00

16-21 Credits

Sample 3-Year Plan

Fall 2nd Year

- ABE 20500 - Computations For Engineering Systems Credits: 3.00
- ABE 29000 - Sophomore Seminar Credits: 1.00
- CHM 11600 - General Chemistry Credits: 4.00 ♦ (if not taken in First Year Engineering)
- MA 26100 - Multivariate Calculus Credits: 4.00
- ME 27000 - Basic Mechanics I Credits: 3.00 ♦
- PHYS 24100 - Electricity And Optics Credits: 3.00 ♦

18 Credits

Spring 2nd Year

- ABE 21000 - Thermodynamics Principles Of Engineering And Biological Systems Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- MA 26200 - Linear Algebra And Differential Equations Credits: 4.00
- ME 27400 - Basic Mechanics II Credits: 3.00
- College of Agriculture Biological Science Selective - Credit Hours: 4.00

17 Credits

Fall 3rd Year

- ABE 30500 - Physical Properties Of Biological Materials Credits: 3.00
- ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- CE 34000 - Hydraulics Credits: 3.00
- CE 34300 - Elementary Hydraulics Laboratory Credits: 1.00
- Humanities or Social Science Selective - Credit Hours: 3.00
  Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- ECON 21000 - Principles Of Economics Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00

17 Credits

Spring 3rd Year

- ABE 31400 - Design Of Electronic Systems Credits: 3.00
- CE 38300 - Geotechnical Engineering I Credits: 3.00
- ABE 42500 - Water Quality Engineering Credits: 3.00 or
- ABE 42600 - Ecological Restoration Engineering Credits: 3.00
- Agricultural Selective - Credit Hours: 3.00
- College of Agriculture Biological Science Selective - Credit Hours: 4.00

16 Credits

Fall 4th Year

- ABE 48400 - Project Planning And Management Credits: 1.00
- ABE 49000 - Professional Practice In Agricultural And Biological Engineering Credits: 1.00
- Environmental and Natural Resources Engineering Technical Selective - Credit Hours: 3.00
- Engineering Technical Selective - Credit Hours: 3.00
- Engineering Technical Selective - Credit Hours: 3.00
- Human Cultures: Humanities - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

17 Credits
Spring 4th Year

- ABE 48600 - Agricultural Engineering Design Credits: 3.00
- Environmental and Natural Resources Engineering Technical Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours 3.00
- Electives - Credit Hours 0.00-2.00

14-15 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Bachelor of Science in Biological Engineering

BioEnvironmental Engineering Concentration for Biological Engineering
BioEnvironmental Engineering Concentration

The Bioenvironmental Engineering Concentration prepares students to work with bioprocessing manufacturers, including food and pharmaceutical industries, look for innovative environmental controls, waste processing, and water treatment to meet corporate sustainability goals and to comply with increasingly strict governmental regulations. The engineering rules-of-thumb and design heuristics based on past practices that have been the standard in municipal wastewater treatment design are less applicable to treating the highly variable waste stream characteristics of specialized industries. In addition, there exists a high potential for identifying value-added products from these water streams.

The world has tremendous need for solutions to problems related to the environment, energy, health, food, and sustainability. Biological systems are related to or at the heart of all of these issues. A biological engineer learns to design and analyze biological systems to develop innovative and practical solutions. Our B.S. graduates are well prepared for careers in the food industry, pharmaceutical industry, biotechnology, and bioprocessing as well as entrance into graduate or medical school. Students may select a major and plan of study within biological engineering that is tailored to their specific career goals. Students in this program earn a Bachelor of Science in Biological Engineering, (BSBE).

Requirements for the Concentration (9 credits)

Bioenvironmental Engineering Selective (6-9 credits)

- ABE 31400 - Design Of Electronic Systems Credits: 3.00
- ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- ABE 42500 - Water Quality Engineering Credits: 3.00
- ABE 42600 - Ecological Restoration Engineering Credits: 3.00
- CE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00 or
- EEE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00

Bioenvironmental Selective (0-3 credits)

- AGRY 25500 - Soil Science Credits: 3.00
- BIOL 48300 - Great Issues: Environmental And Conservation Biology Credits: 3.00
- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- POL 22300 - Introduction To Environmental Policy Credits: 3.00

Biological Engineering, BSBE

About the Program

The world has tremendous need for solutions to problems related to the environment, energy, health, food, and sustainability. Biological systems are related to or at the heart of all of these issues. A biological engineer learns to design and analyze biological systems to develop innovative and practical solutions. Our B.S. graduates are well prepared for careers in the food industry, pharmaceutical industry, biotechnology, and bioprocessing as well as entrance into graduate or medical school. Students may select a major and plan of study within biological engineering that is tailored to their specific career goals. Students in this program earn a Bachelor of Science in Biological Engineering, (BSBE). Some areas of focus include:

BioEnvironmental Engineering: Bioprocessing manufacturers, including food and pharmaceutical industries are looking for innovative environmental controls, waste processing, and water treatment to meet corporate sustainability goals and to comply with increasingly strict governmental regulations. The engineering rules-of-thumb and design heuristics based on past practices
that have been the standard in municipal wastewater treatment design are less applicable to treating the highly variable waste stream characteristics of specialized industries. In addition, there exists a high potential for identifying value added products from these water streams.

**Cellular and Biomolecular Engineering:** This emerging field is expected to rapidly advance and open opportunities in biomanufacturing, drug design, human therapeutics, tissue and organ regeneration, bioenergy and biofuel production, bioremediation, and biodefense.

**Food & Biological Process Engineering:** This is an interdisciplinary field that applies the basic sciences, mathematics, and engineering to convert agricultural commodities into edible foods and biological materials through various processing steps. Advances in genetic engineering lead to new types of crops and new processing methods to create value added products.

**Pharmaceutical Process Engineering:** This program of study is targeted to provide graduates with unique skills and job opportunities to take on roles within all phases of the pharmaceutical industry including research, product and process development, processing engineering, manufacturing, and marketing.

Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top ranked program:

- Multiple opportunities for interaction with faculty in laboratories and in classes
- Student Competitions, Clubs, Global Experiences
- Personalized advising and assigned faculty mentors
- Great opportunities for internships and undergraduate research.
- Numerous departmental scholarships
- Excellent placement record and starting salaries

Watch a video and take a look at some senior projects. We hope to see you in ABE soon!

The Biological Engineering program is accredited by the Engineering Accreditation Commission of ABET.

Biological Engineering Major Change (CODO) Requirements

**Degree Requirements**

**129 Credits Required**

**Pre-ABE Requirements (29-39 credits)**

All courses in this area must have a C- or higher.

*Upon successful completion of Pre-ABE curriculum, students are eligible to enter their preferred engineering major within ABE. For alternative paths to ABE majors, please visit First-Year Engineering and/or speak with an ABE advisor.

**Requirement #1: Intro to Engineering I** - Credit Hours: 2.00-4.00

- ENGR 13100 - Transforming Ideas To Innovation I **Credits:** 2.00
  OR
- ENGR 16100 - Honors Introduction To Innovation And The Physical Science Of Engineering Design I **Credits:** 4.00
  OR
- EPCS 11100 - First Year Participation In EPICS I **Credits:** 1.00 and
• EPCS 12100 - First Year Participation In EPICS II Credits: 1.00
  OR
• VIP 17911 - First Year Participation In Vertically Integrated Projects (VIP) I Credits: 1.00 and
• VIP 17912 - First Year Participation In Vertically Integrated Projects (VIP) II Credits: 1.00
  or
• ENGR 13000 - Transforming Ideas To Innovation, EPICS/VIP Credits: 4.00

Requirement #2: Intro to Engineering II - Credit Hours: 2.00-4.00
• ENGR 13200 - Transforming Ideas To Innovation II Credits: 2.00 or
• ENGR 13300 - Transforming Ideas To Innovation, EPICS/VIP Credits: 2.00 or
• ENGR 16200 - Honors Introduction To Innovation And The Physical Science Of Engineering Design II Credits: 4.00 or
  ENGR 13000 - Transforming Ideas To Innovation, EPICS/VIP

Requirement #3: Calculus I - Credit Hours: 4.00-5.00 (satisfies Quantitative Reasoning for core)
• MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00 or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00

Requirement #4: Calculus II - Credit Hours: 4.00-5.00
• MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00 or
• MA 16600 - Analytic Geometry And Calculus II Credits: 4.00

Requirement #5: Chemistry I - Credit Hours: 4.00-6.00 (satisfies Science #1 for core)
• CHM 11500 - General Chemistry Credits: 4.00
  OR
• CHM 11510 - General Chemistry I Credits: 3.00
  and
• CHM 11520 - General Chemistry I - Laboratory Credits: 1.00 or
• CHM 11530 - General Chemistry I - Virtual Laboratory Credits: 1.00
  OR
• CHM 11100 - General Chemistry Credits: 3.00 and
• CHM 11200 - General Chemistry Credits: 3.00

Requirement #6: Physics - Credit Hours: 4.00 (satisfies Science #2 for core)
• PHYS 17200 - Modern Mechanics Credits: 4.00
  OR
• ENGR 16100 - Honors Introduction To Innovation And The Physical Science Of Engineering Design I and
• ENGR 16200 - Honors Introduction To Innovation And The Physical Science Of Engineering Design II

Requirement #7: Pre-ABE First-Year Engineering Selective - Credit Hours: 3.00-4.00
Note: To maintain degree progression:
• Biological Engineering majors should take CHM 11600
• Agricultural and Environmental and Natural Resources Engineering majors should take CS 15900 or CS 17700.
• CS 15900 - C Programming Credits: 3.00 or
• CS 17700 - Programming With Multimedia Objects Credits: 4.00 or
• CHM 11600 - General Chemistry

Requirement #8: Written and Oral Communication - Credit Hours: 6.00-7.00 Two of the following course options:
• Written Communication - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Oral Communication - Credit Hours: 3.00 (satisfies Oral Communication for core)
• SCLA 11000 - Language And Cultural Exchange I: Self In Context Credits: 3.00
• SCLA 11100 - Language And Cultural Exchange II: Texts And Contexts Credits: 3.00

Departmental/Program Major Courses (51 credits)

Required Major Courses (51 credits)

• ABE 20100 - Material And Energy Balances In Biological Engineering Credits: 4.00
• ABE 20200 - Thermodynamics In Biological Engineering Credits: 3.00
• ABE 22600 - Biotechnology Laboratory I Credits: 2.00
• ABE 29000 - Sophomore Seminar Credits: 1.00 (satisfies Science, Technology, & Society for core)
• ABE 30100 - Modeling And Computational Tools In Biological Engineering Credits: 3.00
• ABE 30200 - Biochemical Laboratory Techniques For Biological Engineers Credits: 1.00
• ABE 30300 - Physical Chemistry In Biological Engineering Credits: 3.00
• ABE 30400 - Biological Engineering Laboratory Credits: 3.00
• ABE 30700 - Momentum Transfer In Biological Engineering Credits: 3.00
• ABE 30800 - Heat And Mass Transfer In Biological Engineering Credits: 3.00
• ABE 37000 - Reaction Kinetics In Biological Engineering Credits: 3.00
• ABE 45700 - Unit Operations In Biological Engineering Credits: 3.00
• ABE 46000 - Sensors And Process Control Credits: 3.00
• ABE 49000 - Professional Practice In Agricultural And Biological Engineering Credits: 1.00
• ABE 55700 - Biological Engineering Design I Credits: 3.00
• ABE 55800 - Biological Engineering Design II Credits: 3.00
• Biological Engineering Selective - Credit Hours: 9.00

Other Departmental Requirements (77-79 credits)

Click here for Pre-Agricultural and Biological Engineering Requirements

• ENGR 13100 - Transforming Ideas To Innovation I Credits: 2.00 (satisfies Information Literacy for core)
• ENGR 13200 - Transforming Ideas To Innovation II Credits: 2.00
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• BIOL 23000 - Biology Of The Living Cell Credits: 3.00
• BCHM 30700 - Biochemistry Credits: 3.00
• CHM 11500 - General Chemistry Credits: 4.00 (satisfies Science #1 for core)
• CHM 11600 - General Chemistry Credits: 4.00 (satisfies Science #2 for core)
• CHM 25700 - Organic Chemistry Credits: 4.00 or
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 and
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
• CS 15900 - C Programming Credits: 3.00 or
• CS 17700 - Programming With Multimedia Objects Credits: 4.00
• MA 15500 - Analytic Geometry And Calculus I Credits: 4.00 (satisfies Quantitative Reasoning for core) or
• MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00 (satisfies Quantitative Reasoning for core)
• MA 16600 - Analytic Geometry And Calculus II Credits: 4.00 or
• MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00
• MA 26100 - Multivariate Calculus Credits: 4.00
• MA 26200 - Linear Algebra And Differential Equations Credits: 4.00
• PHYS 17200 - Modern Mechanics Credits: 4.00
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (0-1 credits)

• Electives - Credit Hours: 0.00-1.00

Optional Concentrations

• BioEnvironmental Engineering Concentration for Biological Engineering
• Cellular and Biomolecular Engineering Concentration for Biological Engineering
• Food and Biological Process Engineering Concentration for Biological Engineering
• Pharmaceutical Process Engineering Concentration for Biological Engineering

Supplemental Information

Click here for Biological Engineering Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy
College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

GPA Requirements

- Students must have a graduation index of 2.0

Transfer Credit Policy

- Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer credit courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample First-Year Engineering Plan of Study

Fall 1st Year

• Requirement #1 - Intro to Engineering - Credit Hours: 2.00-4.00
• Requirement #3 - Calculus I - Credit Hours: 4.00-5.00
• Requirement #5 - Chemistry - Credit Hours: 4.00-6.00
• Requirement #8 - Written or Oral Communication - Credit Hours: 3.00-4.00

13-19 Credits

Spring 1st Year

• Requirement #2 - Intro to Engineering II - Credit Hours: 2.00-4.00
• Requirement #4 - Calculus II - Credit Hours: 4.00-5.00
• Requirement #6 - Physics - Credit Hours: 4.00
• Requirement #7 - First-Year Engineering Selective - Credit Hours: 3.00-4.00
• Requirement #8 - Written or Oral Communication - Credit Hours: 3.00-4.00

16-21 Credits

Sample 4-Year Plan

Fall 2nd Year

• ABE 20100 - Material And Energy Balances In Biological Engineering Credits: 4.00
• ABE 22600 - Biotechnology Laboratory I Credits: 2.00
• ABE 29000 - Sophomore Seminar Credits: 1.00
• BIOL 23000 - Biology Of The Living Cell Credits: 3.00
• MA 26100 - Multivariate Calculus Credits: 4.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• OR
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00

and
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00

18 Credits

Spring 2nd Year

- ABE 20200 - Thermodynamics In Biological Engineering Credits: 3.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- CHE 32000 - Statistical Modeling And Quality Enhancement Credits: 3.00
- CS 15900 - C Programming Credits: 3.00 or
- CS 17700 - Programming With Multimedia Objects Credits: 4.00
- MA 26200 - Linear Algebra And Differential Equations Credits: 4.00♦

17-18 Credits

Fall 3rd Year

- ABE 30100 - Modeling And Computational Tools In Biological Engineering Credits: 3.00
- ABE 30200 - Biochemical Laboratory Techniques For Biological Engineers Credits: 1.00
- ABE 30300 - Physical Chemistry In Biological Engineering Credits: 3.00
- ABE 30700 - Momentum Transfer In Biological Engineering Credits: 3.00
- BCHM 30700 - Biochemistry Credits: 3.00
- Written or Oral Communication Selective (20000+) - Credit Hours: 3.00

16 Credits

Spring 3rd Year

- ABE 30400 - Biological Engineering Laboratory Credits: 3.00
- ABE 30800 - Heat And Mass Transfer In Biological Engineering Credits: 3.00
- ABE 37000 - Reaction Kinetics In Biological Engineering Credits: 3.00
- ABE 45700 - Unit Operations In Biological Engineering Credits: 3.00
  Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
• Biological Engineering Selective - Credit Hours: 3.00

18 Credits

Fall 4th Year

• ABE 46000 - Sensors And Process Control Credits: 3.00
• ABE 49000 - Professional Practice In Agricultural And Biological Engineering Credits: 1.00
• ABE 55700 - Biological Engineering Design I Credits: 3.00
• Biological Engineering Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 0.00-1.00

13-14 Credits

Spring 4th Year

• ABE 55800 - Biological Engineering Design II Credits: 3.00
• Biological Engineering Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

15 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS-Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course
The course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Food and Biological Process Engineering Concentration for Biological Engineering**

**About the Concentration**

The Food and Biological Process Engineering Concentration is an interdisciplinary field that applies the basic sciences, mathematics, and engineering to convert agricultural commodities into edible foods and biological materials through various processing steps. Advances in genetic engineering lead to new types of crops and new processing methods to create value-added products.

The world has tremendous need for solutions to problems related to the environment, energy, health, food, and sustainability. Biological systems are related to or at the heart of all of these issues. A biological engineer learns to design and analyze biological systems to develop innovative and practical solutions. Our B.S. graduates are well prepared for careers in the food industry, pharmaceutical industry, biotechnology, and bioprocessing as well as entrance into graduate or medical school. Students may select a major and plan of study within biological engineering that is tailored to their specific career goals. Students in this program earn a Bachelor of Science in Engineering in Biological Engineering, (BSE-BE).

**Requirements for the Concentration (9 credits)**

**Food and Biological Process Engineering Selective (6-9 credits)**

- ABE 31400 - Design Of Electronic Systems Credits: 3.00
- ABE 59100 - Special Topics Credits: 0.00 to 4.00 - Title: Principles of Sustainable Biomanufacturing
- CHE 30600 - Design Of Staged Separation Processes Credits: 3.00
- ABE 58000 - Advanced Processes In Biological Engineering Credits: 3.00 or
- CHE 52500 - Biochemical Engineering Credits: 3.00

**Food and Biological Process Selective (0-3 credits)**
Concentration

Pharmaceutical Process Engineering Concentration for Biological Engineering

Pharmaceutical Process Engineering Concentration

The Pharmaceutical Process Engineering Concentration is targeted to provide graduates with unique skills and job opportunities to take on roles within all phases of the pharmaceutical industry including research, product and process development, processing engineering, manufacturing, and marketing.

The world has tremendous need for solutions to problems related to the environment, energy, health, food, and sustainability. Biological systems are related to or at the heart of all of these issues. A biological engineer learns to design and analyze biological systems to develop innovative and practical solutions. Our B.S. graduates are well prepared for careers in the food industry, pharmaceutical industry, biotechnology, and bioprocessing as well as entrance into graduate or medical school. Students may select a major and plan of study within biological engineering that is tailored to their specific career goals. Students in this program earn a Bachelor of Science in Engineering in Biological Engineering, (BSE-BE).

Requirements for the Concentration (9 credits)

Pharmaceutical Process Engineering Selective (6-9 credits)

- ABE 31400 - Design Of Electronic Systems Credits: 3.00
- ABE 59100 - Special Topics Credits: 0.00 to 4.00 - Title: Principles of Sustainable Biomanufacturing
- CHE 55300 - Pharmaceutical Process, Development And Design Credits: 3.00
- ABE 58000 - Advanced Processes In Biological Engineering Credits: 3.00 or
- CHE 52500 - Biochemical Engineering Credits: 3.00

Pharmaceutical Process Selective (0-3 credits)

- ABE 32700 - Biotechnology Laboratory II Credits: 2.00
- ABE 51100 - Drug Development Credits: 3.00
- IMPH 56200 - Introduction To Pharmaceutical Manufacturing Processes Credits: 4.00
- PHSC 42800 - Dosage Forms I Credits: 3.00
- PHSC 42900 - Dosage Forms II Credits: 2.00

Minor
Agricultural Systems Management Minor

About the Program

Agricultural Systems Management (ASM) prepares individuals to organize and manage environmentally sound, technology-based businesses. The program's emphasis is on planning and directing an industry or business project with responsibility for results. ASM is based on an understanding of how equipment and buildings are used with plants and animals and their products. These processes require an understanding of the biological sciences to produce and maintain top product quality.

Computer skills are taught and used throughout the curriculum. Computers are used to collect and analyze data, and then using that information, to control machines and processes. Other uses involve planning layouts of equipment and buildings, creating graphics for reports, etc.

Agricultural Systems Management students also take several courses in communications, business management, and agricultural sciences, in addition to their specialty courses based in the Agricultural and Biological Engineering Department. The program provides in-depth technical knowledge for selecting and applying advanced technologies in the food, feed, fiber, and fuel systems. Graduates are prepared to solve a wide variety of business and technical problems in a job field that continues to grow.

Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top-ranked program:

- Multiple opportunities for interaction with faculty in laboratories and classes
- Student Competitions, Clubs, Global Experiences
- Personalized advising and attention from faculty
- Practical curriculum for industrial careers
- Great opportunities for internships and undergraduate research.
- Numerous departmental scholarships
- Excellent placement record and starting salaries

Requirements for the Minor (18 credits)

Required Courses (6 credits)

- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- ASM 10500 - Computing Technology With Applications Credits: 3.00

Selective Courses (12 credits)

- Nine credits must be ASM courses
- At least six credits must be 30000+ level courses, of which three credits must be ASM courses.

- AGE 31000 - Farm Organization Credits: 3.00
- AGE 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGRY 37500 - Crop Production Systems Credits: 3.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ASM 20100 - Construction And Maintenance Credits: 3.00
- ASM 21100 - Technical Graphic Communications Credits: 3.00
- ASM 21600 - Introduction To Surveying Credits: 1.00
• ASM 22200 - Crop Production Equipment **Credits:** 3.00
• ASM 23600 - Environmental Systems Management **Credits:** 3.00
• ASM 24500 - Materials Handling And Processing **Credits:** 3.00
• ASM 34500 - Power Units And Power Trains **Credits:** 3.00
• ASM 33300 - Facilities Planning And Management **Credits:** 3.00
• ASM 35000 - Safety In Agriculture **Credits:** 1.00
• ASM 42000 - Electric Power And Controls **Credits:** 3.00
• ASM 42200 - Advanced Machine Technology For Agricultural Crop Production **Credits:** 3.00
• ASM 44100 - Methods Of Teaching Agricultural Mechanics **Credits:** 1.00
• ASM 44400 - Design And Advanced Manufacturing Processes For Internal Combustion Engines **Credits:** 3.00
• ASM 49800 - Directed Experience In Teaching Mechanized Agriculture **Credits:** 1.00 to 3.00
• ASM 51000 - Agrosecurity-Emergency Management For Agricultural Production Operations **Credits:** 3.00
• ASM 51100 - Foundations In Homeland Security Studies **Credits:** 3.00
• ASM 51200 - Managing Resources and Applications for Homeland Security **Credits:** 3.00
• ASM 53000 - Power And Machinery Management **Credits:** 3.00
• ASM 53200 - Introduction To Agricultural Informatics **Credits:** 3.00
• ASM 54000 - Geographic Information System Application **Credits:** 3.00
• ASM 55000 - Grain Drying And Storage **Credits:** 3.00
• ASM 59000 - Special Problems **Credits:** 1.00 to 6.00 Title: GEAPS
• HORT 31800 - Field Production Of Horticultural Crops **Credits:** 3.00
• HORT 31900 - Controlled Environment Production Of Horticultural Crops **Credits:** 3.00

Notes

• Department Permission is not required to enroll in this minor.
• No more than 6 credits of special problems (ASM 49000/49100 and/or 59000/59100) may apply to the minor. Request to use special problems courses toward the minor must be stated on the course contract form and approved by the Department.
• College of Agriculture Lab courses at the 30000+ level or higher may be considered for inclusion for the minor on a case-by-case basis.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Non-Degree
Agricultural Engineering Major Change (CODO) Requirements

Major Change (CODO) Requirements

Purdue students interested in changing their major should meet with their current academic advisor to discuss their options and begin the online process. Once the student's Major Change (CODO) has been processed, students will receive an email with instructions to authorize the change.

Students will need to meet the criteria below to be eligible for this major. A student's catalog term, typically the semester you started at Purdue, will be used to determine the Major Change criteria that applies to you. Students can find their catalog term at the top of their MyPurduePlan below the degree progress bar.

This major change information below is for the catalog term you are currently viewing; see the University Undergraduate Academic Advising Major Change (CODO) website for prior catalog term criteria, more about the major change process and FAQs.

Students changing their major to a space restricted program, as designated by SPACE AVAILABLE BASIS ONLY, need to have their Curricular Change Request (CCR) submitted by their home college/school by 5pm the Thursday of Finals week for requests effective the following term to be considered.

Majors

- Agricultural Engineering, BSAGE (XEAG)

General Requirements

- Minimum Semesters: 1
- Minimum Purdue Main Campus Credit Hours (West Lafayette/Indianapolis): 12
- Minimum Cumulative GPA: 2.5

Course Requirements

C- or better in the following:

- CHM 11500 - General Chemistry Credits: 4.00
- PHYS 17200 - Modern Mechanics Credits: 4.00
- CHM 11600 - General Chemistry Credits: 4.00 or
- CS 15900 - C Programming Credits: 3.00 or
- CS 17700 - Programming With Multimedia Objects Credits: 4.00
- MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00 or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00 or
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- Oral Communication Foundational Outcome course (typically COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 )
- Written Communication Foundational Outcome course (typically ENGL 10600 - First Year Composition With Conferences Credits: 4.00 )
Other Requirements

- Students are accepted for effective terms FALL, SPRING, and SUMMER.
- Major is open with no anticipated space restrictions.
- Students must be in good academic standing (not on academic notice).
- CODO into Agricultural Engineering is only applicable to students not in First Year Engineering. FYE students must follow the Transition to Major process.

Advising Website

Agricultural and Biological Engineering Advising website

Student Next Steps

Students are encouraged to speak with a departmental advisor.

Agricultural Engineering Supplemental Information

Agricultural Selective (3 credits)

- ABE 10000:59999
- AGEC 10000:59999
- AGR 10000:59999
- AGRY 10000:59999
- ANSC 10000:59999
- ASEC 10000:59999
- ASM 10000:59999
- BCHM 10000:59999
- BTNY 10000:59999
- ENTM 10000:59999
- FNR 10000:59999
- FS 10000:59999
- HORT 10000:59999
- LA 10000:59999
- NRES 10000:59999

College of Agriculture: Biological Science Selective (8 credits)

To fulfill the biological sciences core requirement, all students must complete at least two hours of laboratory credit in biological sciences each week for 32 weeks, or equivalent. Completion of course sequences is recommended. Courses with an (*) have a laboratory component.

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 *
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 *
- BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
- BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
• BIOL 13500 - First Year Biology Laboratory Credits: 2.00 *
• BIOL 20300 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 20400 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 22100 - Introduction To Microbiology Credits: 4.00 *
• BIOL 23000 - Biology Of The Living Cell Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00 *
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00 *
• BIOL 29500 - Special Assignments Credits: 0.00 to 18.00 (Title: Quantitative Biology of the Living Cell)
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 *
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• HORT 30100 - Plant Physiology Credits: 4.00 *

Engineering Technical Selective (6 credits)

• ABE 46000 - Sensors And Process Control Credits: 3.00
• ABE 49500 - Select Topics In Agricultural And Biological Engineering Credits: 1.00 to 3.00
• ABE 49800 - Undergraduate Research In Agricultural And Biological Engineering Credits: 1.00 to 3.00
• ABE 49900 - Thesis Research Credits: 1.00 to 6.00
• ABE 53100 - Instrumentation And Data Acquisition Credits: 3.00
• ABE 54500 - Design Of Off-Highway Vehicles Credits: 3.00
• ABE 58000 - Advanced Processes In Biological Engineering Credits: 3.00
• CE 38300 - Geotechnical Engineering I Credits: 3.00
• ECE 20700 - Electronic Measurement Techniques Credits: 1.00
• IE 37000 - Manufacturing Processes I Credits: 3.00
• IE 34300 - Engineering Economics Credits: 3.00
• IE 577 - Human Factors In Engineering Credits: 3.00
• ME 26300 - Introduction To Mechanical Engineering Design, Innovation And Entrepreneurship Credits: 3.00
• ME 30000 - Thermodynamics II Credits: 3.00
• ME 31500 - Heat And Mass Transfer Credits: 4.00
• ME 36500 - Measurement And Control Systems I Credits: 3.00
• ME 37500 - Measurement And Control Systems II Credits: 3.00
• ME 41300 - Noise Control Credits: 3.00
• ME 41800 - Engineering Of Environmental Systems And Equipment Credits: 3.00
• ME 43300 - Principles Of Turbomachinery Credits: 3.00
• ME 44000 - Automotive Prime Movers: Green Engines And Clean Fuel Credits: 3.00
• ME 47500 - Automatic Control Systems Credits: 3.00
• MSE 23000 - Structure And Properties Of Materials Credits: 3.00

Agricultural Systems Management Supplemental Information

Agricultural Selective (12 credits)

• ABE 10000:59999
College of Agriculture: Biological Science Selective (8 credits)

To fulfill the biological sciences core requirement, all students must complete at least two hours of laboratory credit in biological sciences each week for 32 weeks, or equivalent. Completion of course sequences is recommended. Courses with an (*) have a laboratory component.

- **BIOL 11000 - Fundamentals Of Biology I** Credits: 4.00 *
- **BIOL 11100 - Fundamentals Of Biology II** Credits: 4.00 *
- **BIOL 12100 - Biology I: Diversity, Ecology, And Behavior** Credits: 2.00
- **BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms** Credits: 3.00
- **BIOL 13500 - First Year Biology Laboratory** Credits: 2.00 *
- **BIOL 20300 - Human Anatomy And Physiology** Credits: 4.00 *
- **BIOL 20400 - Human Anatomy And Physiology** Credits: 4.00 *
- **BIOL 22100 - Introduction To Microbiology** Credits: 4.00 *
- **BIOL 23000 - Biology Of The Living Cell** Credits: 3.00
- **BIOL 23100 - Biology III: Cell Structure And Function** Credits: 3.00
- **BIOL 23200 - Laboratory In Biology III: Cell Structure And Function** Credits: 2.00 *
- **BIOL 24100 - Biology IV: Genetics And Molecular Biology** Credits: 3.00
- **BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology** Credits: 2.00 *
- **BIOL 29500 - Special Assignments** Credits: 0.00 to 18.00 (Title: Quantitative Biology of the Living Cell)
- **BTNY 11000 - Introduction To Plant Science** Credits: 4.00 *
- **BTNY 12000 - Principles Of Plant Biology I** Credits: 4.00
- **BTNY 12100 - Principles Of Plant Biology II** Credits: 4.00
- **HORT 30100 - Plant Physiology** Credits: 4.00 *

Leadership and Management Selective (6 credits)

- **OLS 37500 - Training Methods** Credits: 3.00
- **OLS 37600 - Human Resource Issues** Credits: 3.00
- **OLS 38600 - Leadership For Organizational Change** Credits: 3.00
- **OLS 45400 - Gender And Diversity In Management** Credits: 3.00
• OLS 47700 - Conflict Management Credits: 3.00
• OLS 48400 - Leadership Strategies For Quality And Productivity Credits: 3.00
• OLS 48900 - Digital Transformation Credits: 3.00
• TLI 25500 - Foundations Of Human Resource Development Credits: 3.00
• TLI 31400 - Leading Innovation In Organizations Credits: 3.00

**Biological Engineering Supplemental Information**

**Biological Engineering Selectives**

Selective options are noted below. Students pursuing an optional concentration must choose selectives from the associated concentration list:

- BioEnvironmental Engineering Concentration for Biological Engineering
- Cellular and Biomolecular Engineering Concentration for Biological Engineering
- Food and Biological Process Engineering Concentration for Biological Engineering
- Pharmaceutical Process Engineering Concentration for Biological Engineering

**Biological Engineering Selectives (6-9 hours)**

- ABE 31400 - Design Of Electronic Systems Credits: 3.00
- ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- ABE 42500 - Water Quality Engineering Credits: 3.00
- ABE 42600 - Ecological Restoration Engineering Credits: 3.00
- ABE 44000 - Cell And Molecular Modeling In Biological Engineering Credits: 3.00
- ABE 59100 - Special Topics Credits: 0.00 to 4.00 - Title: Principles of Sustainable Biomanufacturing
- BME 47000 - Biomolecular Engineering Credits: 3.00
- BME 55100 - Tissue Engineering Credits: 3.00
- CHE 30600 - Design Of Staged Separation Processes Credits: 3.00
- CHE 55300 - Pharmaceutical Process, Development And Design Credits: 3.00
- ABE 58000 - Advanced Processes In Biological Engineering Credits: 3.00 or
- CHE 52500 - Biochemical Engineering Credits: 3.00
- CE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00 or
- EEE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00

**Biological Science & Technical Selectives (0-3 credits)**

- ABE 32700 - Biotechnology Laboratory II Credits: 2.00
- ABE 51100 - Drug Development Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- BIOL 48300 - Great Issues: Environmental And Conservation Biology Credits: 3.00
- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- FS 36100 - Food Plant Sanitation Credits: 1.00
- FS 36200 - Food Microbiology Credits: 3.00
- FS 36300 - Food Microbiology Laboratory Credits: 2.00
- FS 45300 - Food Chemistry Credits: 3.00
- IMPH 56200 - Introduction To Pharmaceutical Manufacturing Processes Credits: 4.00
- NUTR 20500 - Food Science I Credits: 3.00
- NUTR 31500 - Fundamentals Of Nutrition Credits: 3.00
- PHSC 42800 - Dosage Forms I Credits: 3.00
- PHSC 42900 - Dosage Forms II Credits: 2.00
- POL 22300 - Introduction To Environmental Policy Credits: 3.00

**Environmental and Natural Resources Engineering Supplemental Information**

**Agriculture Selective (3 credits)**

- ABE 10000:59999
- AGEC 10000:59999
- AGR 10000:59999
- AGRY 10000:59999
- ANSC 10000:59999
- ASEC 10000:59999
- ASM 10000:59999
- BCHM 10000:59999
- BTNY 10000:59999
- ENTM 10000:59999
- FNR 10000:59999
- FS 10000:59999
- HORT 10000:59999
- LA 10000:59999
- NRES 10000:59999
- SFS 10000:59999

**College of Agriculture: Biological Science Selective (8 credits)**

*To fulfill the biological sciences core requirement, all students must complete at least two hours of laboratory credit in biological sciences each week for 32 weeks, or equivalent. Completion of course sequences is recommended. Courses with an (*) have a laboratory component.*

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 *
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 *
- BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
- BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
- BIOL 13500 - First Year Biology Laboratory Credits: 2.00 *
- BIOL 20300 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 20400 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 22100 - Introduction To Microbiology Credits: 4.00 *
• BIOL 23000 - Biology Of The Living Cell Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00 *
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00 *
• BIOL 29500 - Special Assignments Credits: 0.00 to 18.00 (Title: Quantitative Biology of the Living Cell)
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 *
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• HORT 30100 - Plant Physiology Credits: 4.00 *

Engineering Technical Selective (6 credits)

• ABE 32000 - Solid Modeling, Simulation, And Analysis Credits: 3.00
• ABE 33000 - Design Of Machine Components Credits: 3.00
• ABE 42500 - Water Quality Engineering Credits: 3.00
• ABE 42600 - Ecological Restoration Engineering Credits: 3.00
• ABE 43500 - Hydraulic Control Systems For Mobile Equipment Credits: 3.00
• ABE 45000 - Computational Modeling And Data Analysis In Agricultural Engineering Credits: 3.00
• ABE 46000 - Sensors And Process Control Credits: 3.00
• ABE 49500 - Select Topics In Agricultural And Biological Engineering Credits: 1.00 to 3.00
• ABE 49800 - Undergraduate Research In Agricultural And Biological Engineering Credits: 1.00 to 3.00
• ABE 49900 - Thesis Research Credits: 1.00 to 6.00
• ABE 52200 - Ecohydrology Credits: 3.00
• ABE 52700 - Computer Models In Environmental And Natural Resources Engineering Credits: 3.00
• ABE 52900 - Nonpoint Source Pollution Engineering Credits: 3.00
• ABE 53100 - Instrumentation And Data Acquisition Credits: 3.00
• ABE 54500 - Design Of Off-Highway Vehicles Credits: 3.00
• ABE 58000 - Advanced Processes In Biological Engineering Credits: 3.00
• CE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00
• CE 35500 - Engineering Environmental Sustainability Credits: 3.00
• CE 40800 - Geographic Information Systems In Engineering Credits: 3.00
• CE 44000 - Urban Hydraulics Credits: 3.00
• CE 44200 - Introduction To Hydrology Credits: 3.00
• CE 44300 - Introductory Environmental Fluid Mechanics Credits: 3.00
• CE 45600 - Wastewater Treatment Processes Credits: 3.00
• CE 45700 - Air Pollution Control And Design Credits: 3.00
• CE 49700 - Civil Engineering Projects Credits: 0.00 to 18.00
• CE 54000 - Open Channel Hydraulics Credits: 3.00
• CE 54200 - Hydrology Credits: 3.00
• CE 54300 - Coastal Engineering Credits: 3.00
• CE 54400 - Subsurface Hydrology Credits: 3.00
• CE 54500 - Sediment Transport Engineering Credits: 3.00
• CE 54900 - Computational Watershed Hydrology Credits: 3.00
• CE 55000 - Physico-Chemical Processes In Environmental Engineering I Credits: 3.00
- CE 55700 - Air Quality Management Credits: 3.00
- CE 55900 - Water Quality Modeling Credits: 3.00
- CE 59300 - Environmental Geotechnology Credits: 3.00
- EEE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00
- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- EPCS 30100 - Junior Participation In EPICS Credits: 1.00 and
- EPCS 30200 - Junior Participation In EPICS Credits: 2.00
- EPCS 41100 - Senior Design Participation In EPICS Credits: 1.00 and
- EPCS 41200 - Senior Design Participation In EPICS Credits: 2.00
- GEP Global Engineering Projects

Environmental and Natural Resources Engineering Technical Selectives (6 credits)

- ABE 42500 - Water Quality Engineering Credits: 3.00
- ABE 42600 - Ecological Restoration Engineering Credits: 3.00
- ABE 46000 - Sensors And Process Control Credits: 3.00
- ABE 49500 - Select Topics In Agricultural And Biological Engineering Credits: 1.00 to 3.00
- ABE 49800 - Undergraduate Research In Agricultural And Biological Engineering Credits: 1.00 to 3.00
- ABE 49900 - Thesis Research Credits: 1.00 to 6.00
- ABE 52200 - Ecohdrology Credits: 3.00
- ABE 52700 - Computer Models In Environmental And Natural Resources Engineering Credits: 3.00
- ABE 52900 - Nonpoint Source Pollution Engineering Credits: 3.00
- ABE 53100 - Instrumentation And Data Acquisition Credits: 3.00
- ABE 59000 - Special Problems Credits: 1.00 to 6.00
- ABE 59100 - Special Topics Credits: 0.00 to 4.00
- AGRY 33700 - Environmental Hydrology Credits: 3.00
- AGRY 33800 - Environmental Field Skills Credits: 1.00
- AGRY 54500 - Remote Sensing Of Land Resources Credits: 3.00
- ASM 54000 - Geographic Information System Application Credits: 3.00
- CE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00
- CE 35500 - Engineering Environmental Sustainability Credits: 3.00
- CE 38300 - Geotechnical Engineering I Credits: 3.00
- CE 44200 - Introduction To Hydrology Credits: 3.00
- CE 54200 - Hydrology Credits: 3.00
- EEE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00
- EEE 35500 - Engineering Environmental Sustainability Credits: 3.00
- FNR 55800 - Remote Sensing Analysis And Applications Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00

Pre-Agricultural and Biological Engineering Major Change (CODO) Requirements

Major Change (CODO) Requirements
Purdue students interested in changing their major should meet with their current academic advisor to discuss their options and begin the online process. Once the student's Major Change (CODO) has been processed, students will receive an email with instructions to authorize the change.

Students will need to meet the criteria below to be eligible for this major. A student's catalog term, typically the semester you started at Purdue, will be used to determine the Major Change criteria that applies to you. Students can find their catalog term at the top of their MyPurduePlan below the degree progress bar.

This major change information below is for the catalog term you are currently viewing; see the University Undergraduate Academic Advising Major Change (CODO) website for prior catalog term criteria, more about the major change process and FAQs.

Students changing their major to a space restricted program, as designated by SPACE AVAILABLE BASIS ONLY, need to have their Curricular Change Request (CCR) submitted by their home college/school by 5pm the Thursday of Finals week for requests effective the following term to be considered.

**Majors**

- Pre-Agricultural and Biological Engineering (PABE)

**General Requirements**

- Minimum Semesters: 1
- Minimum Purdue Main Campus Credit Hours (West Lafayette/Indianapolis): 12
- Minimum Cumulative GPA: 2.7

**Course Requirements**

To be eligible - a student must complete a minimum of 3 courses, at least one from each category (I, II, and III), completed at PWL campus with a C- or better, and earn a 2.5 GPA (known as your CODO GPA) from the courses taken in those categories.

**Category I**

All courses from the following list, taken for a letter grade at PWL, will be used in the calculation of the CODO GPA.

- MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00
- MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- MA 26100 - Multivariate Calculus Credits: 4.00
- MA 26200 - Linear Algebra And Differential Equations Credits: 4.00
- MA 26500 - Linear Algebra Credits: 3.00
- MA 26600 - Ordinary Differential Equations Credits: 3.00
- MA 30300 - Differential Equations And Partial Differential Equations For Engineering And The Sciences Credits: 3.00

**Category II**

All courses from the following list, taken for a letter grade at PWL, will be used in the calculation of the CODO GPA.
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
• BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00 and BIOL 13500 First Year Biology Laboratory
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 and CHM 11200 General Chemistry
• CHM 11500 - General Chemistry Credits: 4.00
• CHM 11600 - General Chemistry Credits: 4.00
• CHM 12500 - Introduction To Chemistry I Credits: 5.00
• CHM 12600 - Introduction To Chemistry II Credits: 5.00
• CHM 12901 - General Chemistry With A Biological Focus Credits: 5.00
• CHM 13600 - General Chemistry Honors Credits: 4.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• CHM 26100 - Organic Chemistry I Credits: 3.00
• CHM 26200 - Organic Chemistry II Credits: 3.00
• CHM 26300 - Organic Chemistry Laboratory I Credits: 1.00
• CHM 26400 - Organic Chemistry Laboratory II Credits: 1.00
• CHM 37000 - Topics In Physical Chemistry Credits: 3.00
• CS 15900 - C Programming Credits: 3.00
• CS 18000 - Problem Solving And Object-Oriented Programming Credits: 4.00
• PHYS 17200 - Modern Mechanics Credits: 4.00
• PHYS 24100 - Electricity And Optics Credits: 3.00
• PHYS 25200 - Electricity And Optics Laboratory Credits: 1.00
• PSY 27200 - Introduction To Industrial-Organizational Psychology Credits: 3.00

Category III

Only one course from the following list, taken for a letter grade at PWL, will be used in the calculation of the CODO GPA. If more than one course has been completed with a letter grade at PWL for Category III, then the course used in the calculation of the CODO GPA will be selected in the following order:

• An Introductory Engineering Course
  ○ ENGR 13100 Transforming Ideas To Innovation I
  ○ ENGR 13300 Transforming Ideas To Innovation, EPICS/VIP
• A course from the Written Communications Foundational Outcome list
• A course from the Oral Communications Foundational Outcome list
• A course from the Humanities or Behavioral and Social Sciences Foundational Outcome lists

Other Requirements

• Students are accepted for effective terms FALL and SPRING
• Students are admitted on a SPACE AVAILABLE BASIS ONLY after holistic review. Space is limited.
• Students must be in good academic standing (not on academic notice)
• Students must be committed to pursuing one of the engineering degrees offered by the Department of Agricultural and Biological Engineering.
Advising Website

Agricultural and Biological Engineering Advising website

Student Next Steps

Students may contact the ABE Advising Office to schedule an appointment with an advisor regarding ABE degree program and CODO eligibility.

Pre-Program

Pre-Agricultural and Biological Engineering

About the Program

Pre-ABE is an alternative to First Year Engineering. The required classes are identical to First Year Engineering requirements. Because of our ties to Agriculture, we have the ability to have engineering students join our program as freshmen. Some of the advantages of coming through Pre-ABE:

- Start in the program you plan to join,
- Be connected from the start - so you know when companies that hire our students will be providing information sessions, etc.
- More likely to receive scholarships from the College of Agriculture

Upon successful completion of the one year Pre-Agricultural and Biological Engineering curriculum students can move to their professional program of choice within Agricultural and Biological Engineering.

Some of the factors that contribute to Agricultural & Biological Engineering at Purdue University being a top ranked program:

- Multiple opportunities for interaction with faculty in laboratories and in classes
- Student Competitions, Clubs, Global Experiences
- Personalized advising and attention from faculty
- Practical curriculum for industrial careers
- Great opportunities for internships and undergraduate research.
- Numerous departmental scholarships
- Excellent placement record and starting salaries

Department of Agricultural and Biological Engineering

Check our program videos below and take a look at some senior projects. We hope to see you in ABE soon!

- Biological Engineering Video
- Environmental and Natural Resources Engineering Video
- Machine Systems Engineering Video

Pre-Agricultural and Biological Engineering Major Change (CODO) Requirements

Pre-ABE Requirements (29-39 credits)

All courses in this area must have a C- or higher.
Upon successful completion of Pre-ABE curriculum, students are eligible to enter their preferred engineering major within ABE. For alternative paths to ABE majors, please visit First-Year Engineering and/or speak with an ABE advisor.

**Requirement #1: Intro to Engineering I** - Credit Hours: 2.00-4.00
- ENGR 13100 - Transforming Ideas To Innovation I *Credits: 2.00*
  OR
- ENGR 16100 - Honors Introduction To Innovation And The Physical Science Of Engineering Design I *Credits: 4.00*
  OR
- EPCS 11100 - First Year Participation In EPICS I *Credits: 1.00* and
- EPCS 12100 - First Year Participation In EPICS II *Credits: 1.00* OR
- VIP 17911 - First Year Participation In Vertically Integrated Projects (VIP) I *Credits: 1.00* and
- VIP 17912 - First Year Participation In Vertically Integrated Projects (VIP) II *Credits: 1.00* or
- ENGR 13000 - Transforming Ideas To Innovation, EPICS/VIP *Credits: 4.00*

**Requirement #2: Intro to Engineering II** - Credit Hours: 2.00-4.00
- ENGR 13200 - Transforming Ideas To Innovation II *Credits: 2.00* or
- ENGR 13300 - Transforming Ideas To Innovation, EPICS/VIP *Credits: 2.00* or
- ENGR 16200 - Honors Introduction To Innovation And The Physical Science Of Engineering Design II *Credits: 4.00* or
  ENGR 13000 - Transforming Ideas To Innovation, EPICS/VIP

**Requirement #3: Calculus I** - Credit Hours: 4.00-5.00 (satisfies Quantitative Reasoning for core)
- MA 16100 - Plane Analytic Geometry And Calculus I *Credits: 5.00* or
- MA 16500 - Analytic Geometry And Calculus I *Credits: 4.00*

**Requirement #4: Calculus II** - Credit Hours: 4.00-5.00
- MA 16200 - Plane Analytic Geometry And Calculus II *Credits: 5.00* or
- MA 16600 - Analytic Geometry And Calculus II *Credits: 4.00*

**Requirement #5: Chemistry I** - Credit Hours: 4.00-6.00 (satisfies Science #1 for core)
- CHM 11500 - General Chemistry *Credits: 4.00*
  OR
- CHM 11510 - General Chemistry I *Credits: 3.00* and
- CHM 11520 - General Chemistry I - Laboratory *Credits: 1.00* or
- CHM 11530 - General Chemistry I - Virtual Laboratory *Credits: 1.00* OR
- CHM 11100 - General Chemistry *Credits: 3.00* and
- CHM 11200 - General Chemistry *Credits: 3.00*

**Requirement #6: Physics** - Credit Hours: 4.00 (satisfies Science #2 for core)
- PHYS 17200 - Modern Mechanics *Credits: 4.00*
  OR
- ENGR 16100 - Honors Introduction To Innovation And The Physical Science Of Engineering Design I and
- ENGR 16200 - Honors Introduction To Innovation And The Physical Science Of Engineering Design II

**Requirement #7: Pre-ABE First-Year Engineering Selective** - Credit Hours: 3.00-4.00
Note: To maintain degree progression:
• Biological Engineering majors should take CHM 11600
• Agricultural and Environmental and Natural Resources Engineering majors should take CS 15900 or CS 17700.
• CS 15900 - C Programming Credits: 3.00 or
• CS 17700 - Programming With Multimedia Objects Credits: 4.00 or
• CHM 11600 - General Chemistry

Requirement #8: Written and Oral Communication - Credit Hours: 6.00-7.00 Two of the following course options:
• Written Communication - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Oral Communication - Credit Hours: 3.00 (satisfies Oral Communication for core)
• SCLA 11000 - Language And Cultural Exchange I: Self In Context Credits: 3.00
• SCLA 11100 - Language And Cultural Exchange II: Texts And Contexts Credits: 3.00

Grade Average Requirement

To complete the Pre-ABE program:

1. The student's cumulative GPA must be of 2.00 or greater.
2. An Engineering Admissions Index (EAI) must be 2.00 or greater. Calculation of the EAI is equivalent to the calculation of GPA for courses used to meet all FYE requirements above.
3. If a student meets a requirement in more than one way, only one will be used to calculate the EAI. The FYE Committee will be responsible for keeping an updated, clear, and universal set of rules for determining which course is used in EAI for these situations.
4. These rules are available to students in the FYE Advising office. 5. For more information click here or talk with an FYE academic advisor

Grade Requirements

Earned grades must be C- or better for any course used to meet the First-Year Engineering requirements, if the grade posts to the Purdue transcript.

Pass/No Pass Policy

Pass/No Pass grades are not accepted for any course used to meet the First-Year Engineering requirements

Transfer Credit Policy

Equivalent credit earned at other universities may meet FYE and degree requirements. Purdue requires a grade of C- or higher for a transfer course to be awarded Purdue credit, but the exact grade will not be included in your Purdue GPA or your EAI. Note that courses taken on Purdue Regional campuses (Purdue-North Central, Purdue-Calumet, PFW - see here for details) are not considered transfer courses; grades from these courses do count on your Purdue GPA and EAI. Students who are currently enrolled at another university are encouraged to visit the Office of Admissions website for information on transfer requirements. The Purdue Transfer Credit Database may also be useful to determine if courses from the other university have already been evaluated for equivalence to Purdue courses. Many FYE students take summer courses at a different university. Students can find information about summer options and credit on the First-Year Engineering website: https://engineering.purdue.edu/ENE/Academics/Undergrad/FYE/SummerCourses.

University Requirements
University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample First-Year Engineering Plan of Study

Fall 1st Year

- Requirement #1 - Intro to Engineering - Credit Hours: 2.00-4.00
- Requirement #3 - Calculus I - Credit Hours: 4.00-5.00
- Requirement #5 - Chemistry - Credit Hours: 4.00-6.00
- Requirement #8 - Written or Oral Communication - Credit Hours: 3.00-4.00

13-19 Credits

Spring 1st Year
- Requirement #2 - Intro to Engineering II - Credit Hours: 2.00-4.00
- Requirement #4 - Calculus II - Credit Hours: 4.00-5.00
- Requirement #6 - Physics - Credit Hours: 4.00
- Requirement #7 - First-Year Engineering Selective - Credit Hours: 3.00-4.00
- Requirement #8 - Written or Oral Communication - Credit Hours: 3.00-4.00

16-21 Credits

Notes

- Students pursuing Biological Engineering majors should take CHM 11600. Students pursuing Agricultural Engineering or Environmental and Natural Resources Engineering majors may take CHM 11600 or CS 15900 or CS 17700.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Department of Agricultural Economics

Overview

The Department of Agricultural Economics has a long history of preparing students for careers in the food and agricultural industry as well as preparation for graduate and law school. The variation of majors offers students the opportunity to focus in agribusiness, economics, sales and marketing, or farm management.

Students have the opportunity to learn from faculty who lead the department's Center for Food and Agricultural Business and the Center for Commercial Agriculture. The Center for Food and Agricultural Business combines research with real-world applications to offer seminars, workshops, and custom programs to the same companies that are hiring our undergraduate students for internships and full-time positions. The Center for Commercial Agriculture has a vision to "be the leading source of management education and knowledge generation for farmers" bringing a wealth of experienced faculty to guide students interested in a career path in production agriculture.

Students are advised by a passionate group of academic advisors who encourage students to enhance their Purdue experience by participating in transformational experiences. These experiences range from attending a national or campus leadership conference, studying abroad, competing in an academic competition, completing an undergraduate research project, serving as an officer in one of the numerous campus organizations, etc.

Faculty (website)
Department of Agricultural Economics (website)

Contact Information

Department of Agricultural Economics
Purdue University
Krannert Building
403 West State Street
West Lafayette, IN 47907
Phone: (765) 494-4201

Email: LeeAnn Williams (leewill@purdue.edu)

Advising & Student Services Office: Krannert Building (KRAN), Room 566

Prospective Undergraduate Students (website)

Current Undergraduate Students (website)

Graduate Information

For Graduate Information please see Agricultural Economics Graduate Program Information.

Bachelor of Science

Agribusiness: Agribusiness Management Concentration, BS

About the Program

Students completing a degree in Agribusiness must choose a concentration from five choices: Agribusiness Management, Agricultural Finance, Agricultural Marketing, Commodity Marketing, and Food Marketing. The Agribusiness Management concentration requires courses in supply chain management, human relations management, strategic management, and agricultural or business law. Students are prepared to enter managerial positions in a wide variety of agribusiness and non-agribusiness firms as Supply Chain Manager, Production Manager, Account Manager, Human Resource Specialist, and Facilities Location Manager.

Agricultural Economics Website

Agribusiness Major Change (CODO) Requirements
Degree Requirements

120 Credits Required

Departmental/Program Major Courses (60 credits)

Required Major Courses (25 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00

Agribusiness Management Concentration Courses (15 credits)

- AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00 (Capstone)
- AGEC 45500 - Agricultural Law Credits: 3.00 or
- MGMT 45500 - Legal Background For Business I Credits: 3.00
- Agricultural Economics Selective (AGEC 20300:59999) - Credit Hours: 3.00
  Human Relations Management Selective - Credit Hours: 3.00
- MGMT 44301 - Management Of Human Resources Credits: 3.00
- MGMT 44428 - Human Resources Management Credits: 3.00
- OBHR 33000 - Introduction To Organizational Behavior Credits: 3.00
- TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
- TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00
  Industrial Technology Selective - Credit Hours: 3.00
- IET 21400 - Introduction To Supply Chain Management Technology Credits: 3.00
- IET 23500 - Introduction To Systems Thinking And Process Improvement Credits: 3.00
- IET 31600 - Statistical Quality Control Credits: 3.00
- IET 41400 - Financial Analysis For Technology Systems Credits: 3.00

Agricultural Economics Departmental Selectives (20 credits)

- AGEC Biological Science Selective - Credit Hours: 8.00
• AGEC Economics Selective (meets CoA Upper level Humanities/Social Science requirement) - Credit Hours: 3.00
• AGEC Food and Agribusiness Management Selective - Credit Hours: 6.00
• AGEC Additional Mathematics or Science Selective - Credit Hours: 3.00

Agricultural Economics Department Supplemental Information

Other Departmental/Program Course Requirements (43-44 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning and Information Literacy for core)
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
• MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
• MGMT 21200 - Business Accounting Credits: 3.00 ♦
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Science, Technology & Society Selective for core - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
• Written or Oral Communications Selective - Credit Hours: 3.00
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (16-17 credits)

• Electives - Credit Hours: 16.00-17.00

Supplemental List

• Agricultural Economics Department Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00
College of Agriculture Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement
• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- MA 16010 - Applied Calculus I Credits: 3.00
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Oral Communication Selective - Credit Hours: 3.00
- Science, Technology, & Society Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
- Human Cultures: Humanities Selectives - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

16 Credits

Spring 2nd Year
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Human Relations Management Selective - Credit Hours: 3.00
- MGMT 44301 - Management Of Human Resources Credits: 3.00 or
- MGMT 44428 - Human Resources Management Credits: 3.00 or
- OBHR 33000 - Introduction To Organizational Behavior Credits: 3.00 or
- TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00 or
- TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00
- Written or Oral Communication Selective - Credit Hours: 3.00

15 Credits

Fall 3rd Year

- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00
  Industrial Technology Selective - Credit Hours: 3.00
- IET 21400 - Introduction To Supply Chain Management Technology Credits: 3.00 or
- IET 23500 - Introduction To Systems Thinking And Process Improvement Credits: 3.00 or
- IET 31600 - Statistical Quality Control Credits: 3.00 or
- IET 41400 - Financial Analysis For Technology Systems Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

- AGEC 45500 - Agricultural Law Credits: 3.00 or
- MGMT 45500 - Legal Background For Business I Credits: 3.00
- AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00
- AGEC Mathematics or Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

15 Credits

Fall 4th Year

- Agricultural Economics Selective (AGEC 20300:59999) - Credit Hours: 3.00
- AGEC Economics Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Written or Oral Communication Selective - Credit Hours: 3.00
15 Credits

Spring 4th Year

- AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
- AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00
- Electives - Credit Hours: 7.00-8.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Agribusiness: Agricultural Finance Concentration, BS

About the Program
Students completing a degree in Agribusiness must choose a concentration from five choices: Agribusiness Management, Agricultural Finance, Agricultural Marketing, Commodity Marketing, and Food Marketing. The Agricultural Finance concentration requires courses in estate planning or federal income tax law, capital investment analysis, strategic management, agricultural or business law, and additional accounting. Students are prepared to enter a vast number of finance careers including Analyst, Financial Services Officer, Commercial Business Banker or Loan Officer.

Agricultural Economics Website

Agribusiness Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (60 credits)

Required Major Courses (25 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00

Agricultural Finance Concentration Courses (18 credits)

- AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00 or
- AGEC 45600 - Federal Income Tax Law Credits: 3.00
- AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00 (Capstone)
- AGEC 45500 - Agricultural Law Credits: 3.00 or
- MGMT 45500 - Legal Background For Business I Credits: 3.00
- AGEC 52400 - Agricultural Finance Credits: 3.00
- MGMT 20100 - Management Accounting I Credits: 3.00
AGEC Departmental Selectives (17 credits)

- College of Agriculture Biological Science Selective - Credit Hours: 8.00
- AGEC Economics Selective (meets CoA Upper level Humanities/Social Science requirement) - Credit Hours: 3.00
- AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00
- College of Agriculture Mathematics or Science Selective - Credit Hours: 3.00

Other Department/Program Course Requirements (43-44 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00 (30000+ level met with ECON Selective)
- Science, Technology & Society Selective for core - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
- Written or Oral Communications Selective - Credit Hours: 3.00
- Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (16-17 credits)

- Electives - Credit Hours: 16.00-17.00

Supplemental List

- Agricultural Economics Department Supplemental Information

Course Requirements and Notes

- Students must complete a College of Agriculture capstone course. This course can be one of Agricultural Economics' Capstone Courses (AGEC 41100, 42700, 43000, 43100, or 49900) or any approved College of Agriculture capstone course.

College of Agriculture & University Level Requirements
• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:
• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- MA 16010 - Applied Calculus I Credits: 3.00 ♦
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Science, Technology, & Society Selective - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- CHM 11100 - General Chemistry Credits: 3.00 ♦
• STAT 30100 - Elementary Statistical Methods Credits: 3.00  
• Human Cultures: Humanities Selective - Credit Hours: 3.00  
• Elective - Credit Hours: 3.00

16 Credits

Spring 2nd Year

• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00  
• CHM 11200 - General Chemistry Credits: 3.00  
• MGMT 20000 - Introductory Accounting Credits: 3.00  
• MGMT 21200 - Business Accounting Credits: 3.00  
• Humanities or Social Science Selective - Credit Hours: 3.00  
• Written or Oral Communication Selective - Credit Hours: 3.00

15 Credits

Fall 3rd Year

• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00  
• AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00  
• MGMT 20100 - Management Accounting I Credits: 3.00  
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00  
• AGEC 45100 - Applied Econometrics Credits: 3.00  
• Elective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• AGEC 45500 - Agricultural Law Credits: 3.00  
• MGMT 45500 - Legal Background For Business I Credits: 3.00  
• Agricultural Economics Major Selective (AGEC 20300:59999) - Credit Hours: 3.00  
• AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00  
• AGEC Mathematics or Science Selective - Credit Hours: 3.00  
• Elective - Credit Hours: 3.00

15 Credits

Fall 4th Year

• AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00  
• AGEC 45600 - Federal Income Tax Law Credits: 3.00  
• AGEC Economics Selective - Credit Hours: 3.00  
• Humanities or Social Science Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
• Electives - Credit Hours: 5.00

15 Credits

Spring 4th Year

• AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
• AGEC 52400 - Agricultural Finance Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 4.00-5.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Agribusiness: Agricultural Marketing Concentration, BS
About the Program

Students completing a degree in Agribusiness must choose a concentration from five choices: Agribusiness Management, Agricultural Finance, Agricultural Marketing, Commodity Marketing, and Food Marketing. The Agricultural Marketing concentration requires courses in sales and marketing analytics and then allows the students to select four business courses to complete the concentration. Students are prepared for careers as a Sales Representative, Marketing Representative, District Sales Manager, and Brand Manager in a wide variety of agribusiness and non-agribusiness firms.

Agricultural Economics Website

Agribusiness Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (60 credits)

Required Major Courses (25 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00

Agricultural Marketing Concentration Courses (15 credits)

- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00 (Capstone)
- AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
- Agricultural Economics Selective (AGEC 20300:59999) - Credit Hours: 6.00
AGEC Departmental Selectives (20 credits)

- College of Agriculture Biological Science Selective - Credit Hours: 8.00
- AGEC Economics Selective (satisfies College of Agriculture (CoA) Humanities/Social Science 30000+ level requirement) - Credit Hours: 3.00
- AGEC Food and Agribusiness Management Selective - Credit Hours: 6.00
- College of Agriculture Mathematics or Science Selective - Credit Hours: 3.00

Agricultural Economics Department Supplemental Information

Other Departmental/Program Course Requirements (43-44 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Science, Technology & Society Selective for core - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
- Written or Oral Communications Selective - Credit Hours: 3.00
- Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (16-17 credits)

- Electives - Credit Hours: 16.00-17.00

Supplemental List

Agricultural Economics Department Supplemental Information

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

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• Oral Communication (OC)
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• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
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Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
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• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).
Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- **AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits:** 3.00 or
- **AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits:** 3.00 or
- **ECON 25100 - Microeconomics Credits:** 3.00
- **AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits:** 0.50
- **AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits:** 0.50
- **MA 16010 - Applied Calculus I Credits:** 3.00
- **AGEC Biological Sciences Selective - Credit Hours:** 4.00
- **Written Communication Selective - Credit Hours:** 3.00-4.00

14-15 Credits

Spring 1st Year

- **AGEC 21700 - Economics Credits:** 3.00 or
- **ECON 21000 - Principles Of Economics Credits:** 3.00 or
- **ECON 25200 - Macroeconomics Credits:** 3.00

- **AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits:** 3.00
- **AGEC Biological Sciences Selective - Credit Hours:** 4.00
- **Science, Technology, & Society Selective - Credit Hours:** 3.00
- **Oral Communication Selective - Credit Hours:** 3.00

16 Credits

Fall 2nd Year

- **AGEC 22000 - Economics Of Agricultural Markets Credits:** 3.00
- **AGEC 29800 - Careers In Agribusiness Credits:** 1.00
- **CHM 11100 - General Chemistry Credits:** 3.00
- **STAT 30100 - Elementary Statistical Methods Credits:** 3.00
- **Human Cultures: Humanities Selective - Credit Hours:** 3.00
- **Elective - Credit Hours:** 3.00

16 Credits
Spring 2nd Year

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Humanities or Social Science Selective - Credit Hours: 3.00
- Written or Oral Communication Selective - Credit Hours: 3.00

15 Credits

Fall 3rd Year

- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00
- Elective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

- Agricultural Economics Selective (AGEC 20300:59999) - Credit Hours: 3.00
- AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00
- AGEC Mathematics or Science Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
- Elective - Credit Hours 3.00

15 Credits

Fall 4th Year

- AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
- AGEC Economics Selective - Credit Hours: 3.00
- AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

15 Credits

Spring 4th Year

- AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
Agricultural Economics Selective (AGEC 20300:59999) - Credit Hours: 3.00
Humanities or Social Science Selective (30000+level) - Credit Hours: 3.00
Electives - Credit Hours: 4.00-5.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Agribusiness: Commodity Marketing Concentration, BS

About the Program

Students completing a degree in Agribusiness must choose a concentration from five choices: Agribusiness Management, Agricultural Finance, Agricultural Marketing, Commodity Marketing, and Food Marketing. The Commodity Marketing concentration requires courses in price analysis, commodity marketing, strategic management, and production agriculture.
Students are prepared for careers in commodity merchandising and procurement for a vast number of agricultural firms such as grain handling companies; feed manufacturers; and meat, dairy, and poultry processing industries.

Agricultural Economics Website

Agribusiness Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (60 credits)

Required Major Courses (25 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00

Commodity Marketing Concentration Courses (18 credits)

- AGEC 30500 - Agricultural Prices Credits: 3.00
- AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
- AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
- AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00 (Capstone)
- Agricultural Economics Selective (AGEC 20300:59999) - Credit Hours: 3.00
- Agronomy or Animal Science Selective (AGRY 20000+ level or ANSC 20000+ level) - Credit Hours: 3.00

AGEC Departmental Selectives (17 credits)

- AGEC Biological Science Selective - Credit Hours: 8.00 (see supplemental list)
- AGEC Economics Selective - Credit Hours: 3.00 (see supplemental list)
- AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00 (see supplemental list)
- AGEC Mathematics or Science Selective - Credit Hours: 3.00 (see supplemental list)
Other Departmental/Program Course Requirements (43-44 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 ♦ (satisfies Quantitative Reasoning for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Science, Technology & Society Selective for core - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
- Written or Oral Communications Selective - Credit Hours: 3.00
- Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (16-17 credits)

Electives - Credit Hours: 16.00-17.00

Supplemental List

- Agricultural Economics Department Supplemental Information

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy
College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
Students should be able to fulfill *most, if not all,* of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

### Sample 4-Year Plan

#### Fall 1st Year
- **AGEC 20300 - Introductory Microeconomics For Food And Agribusiness** Credits: 3.00 or
- **AGEC 20400 - Introduction To Resource Economics And Environmental Policy** Credits: 3.00
- **ECON 25100 - Microeconomics** Credits: 3.00
- **AGR 10100 - Introduction To The College Of Agriculture And Purdue University** Credits: 0.50
- **AGR 11200 - Introduction To Agricultural Economics Academic Programs** Credits: 0.50
- **ECON 25200 - Macroeconomics** Credits: 3.00
- **MA 16010 - Applied Calculus I** Credits: 3.00
- **AGEC Biological Sciences Selective** Credit Hours: 4.00
- **Written Communication Selective** Credit Hours: 3.00-4.00

14-15 Credits

#### Spring 1st Year
- **AGEC 20201 - Introduction To Data Analytics For Agricultural Business** Credits: 3.00
- **AGEC 21700 - Economics** Credits: 3.00 or
- **ECON 21000 - Principles Of Economics** Credits: 3.00 or
- **ECON 25200 - Macroeconomics** Credits: 3.00
- **AGEC Biological Sciences Selective** Credit Hours: 4.00
- **Oral Communication Selective** Credit Hours: 3.00
- **Science, Technology, & Society Selective** Credit Hours: 3.00

16 Credits

#### Fall 2nd Year
- **AGEC 22000 - Economics Of Agricultural Markets** Credits: 3.00
- **AGEC 29800 - Careers In Agribusiness** Credits: 1.00
- **CHM 11100 - General Chemistry** Credits: 3.00
- **STAT 30100 - Elementary Statistical Methods** Credits: 3.00
- **Human Cultures: Humanities Selective** Credit Hours: 3.00
- **Elective** Credit Hours: 3.00

16 Credits

#### Spring 2nd Year
- **AGEC 33000 - Management Methods For Agricultural Business** Credits: 3.00
• CHM 11200 - General Chemistry Credits: 3.00 
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Written or Oral Communication Selective - Credit Hours: 3.00

15 Credits

Fall 3rd Year

• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
• AGEC 32400 - Financial Management Of Agricultural Business Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
• AGEC 45100 - Applied Econometrics Credits: 3.00
• Elective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
• Agronomy or Animal Science Selective (AGRY 20000+ level or ANSC 20000+ level) - Credit Hours: 3.00
• AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00
• AGEC Mathematics or Science Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Fall 4th Year

• AGEC 30500 - Agricultural Prices Credits: 3.00
• Agricultural Economics Selective (AGEC 20300:59999) - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Electives - Credit Hours: 6.00

15 Credits

Spring 4th Year

• AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
• AGEC Economics Selective - Credit Hours: 3.00
• Humanities or Social Science - Credit Hours: 3.00
• Electives - Credit Hours: 4.00-5.00
13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Agribusiness: Food Marketing Concentration, BS

About the Program

Students completing a degree in Agribusiness must choose a concentration from five choices: Agribusiness Management, Agricultural Finance, Agricultural Marketing, Commodity Marketing, and Food Marketing. The Food Marketing concentration requires courses in sales, food retailing and distribution, marketing, food science, food packaging, nutrition, and food regulations. Students are prepared for careers as a Sales Representative, Marketing Representative, District Sales Manager, Brand Manager, and Retail Manager with food manufacturers and retail food businesses.

Agricultural Economics Website
Agribusiness Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (59 credits)

Required Major Courses (25 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00

Food Marketing Concentration Courses (17 credits)

- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00 (Capstone)
- AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
- FS 16100 - Science Of Food Credits: 3.00
- FS 24500 - Food Packaging Credits: 1.00
- FS 34000 - Introduction To Food Law And Regulations Credits: 1.00

AGEC Departmental Selectives (17 credits)

- AGEC Biological Science Selective - Credit Hours: 8.00 (see supplemental list)
- AGEC Economics Selective (used to meet the CoA Humanities/Social Science 30000+ level requirement) - Credit Hours: 3.00 (see supplemental list)
- AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00 (see supplemental list)
- AGEC Mathematics or Science Selective - Credit Hours: 3.00 (see supplemental list)

Agricultural Economics Department Supplemental Information
Other Departmental /Program Course Requirements (43-44 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Science, Technology & Society Selective for core - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
- Written or Oral Communications Selective - Credit Hours: 3.00
- Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (17-18 credits)

- Electives - Credit Hours: 17.00-18.00

Supplemental List

Agricultural Economics Department Supplemental Information

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy
Transfer Credit Policy

Transfer courses listed in the **Purdue Transfer Equivalency Guide** with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the [Provost's Website](#).

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the [Civics Literacy Proficiency Website](#).

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.
Sample 4-Year Plan

Fall 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness **Credits: 3.00** or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy **Credits: 3.00** or
- ECON 25100 - Microeconomics **Credits: 3.00**
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University **Credits: 0.50**
- AGR 11200 - Introduction To Agricultural Economics Academic Programs **Credits: 0.50**
- MA 16010 - Applied Calculus I **Credits: 3.00**
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business **Credits: 3.00**
- AGEC 21700 - Economics **Credits: 3.00** or
- ECON 21000 - Principles Of Economics **Credits: 3.00** or
- ECON 25200 - Macroeconomics **Credits: 3.00**
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Science, Technology, & Society Selective - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- AGEC 22000 - Economics Of Agricultural Markets **Credits: 3.00**
- AGEC 29800 - Careers In Agribusiness **Credits: 1.00**
- CHM 11100 - General Chemistry **Credits: 3.00**
- FS 16100 - Science Of Food **Credits: 3.00**
- STAT 30100 - Elementary Statistical Methods **Credits: 3.00**
- Human Cultures: Humanities Selective - Credit Hours: 3.00

16 Credits

Spring 2nd Year

- AGEC 33000 - Management Methods For Agricultural Business **Credits: 3.00**
- CHM 11200 - General Chemistry **Credits: 3.00**
- FS 24500 - Food Packaging **Credits: 1.00**
- MGMT 20000 - Introductory Accounting **Credits: 3.00** or
• MGMT 21200 - Business Accounting Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Written or Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 3rd Year

• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
• AGEC 45100 - Applied Econometrics Credits: 3.00
• Elective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
• FS 34000 - Introduction To Food Law And Regulations Credits: 1.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• AGEC Mathematics or Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 6.00

16 Credits

Fall 4th Year

• AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
• AGEC Economics Selective - Credit Hours: 3.00
• AGEC Food and Agribusiness Management Selective - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

12 Credits

Spring 4th Year

• AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
• Humanities or Social Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
• Elective - Credit Hours: 5.00-6.00

14-15 Credits
Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Agricultural Economics: Applied Agricultural Economics Concentration, BS

About the Program

Students completing a degree in Agricultural Economics must choose a concentration from three choices: Applied Agricultural Economics, Commodity Marketing, and Quantitative Analysis. The Applied Agricultural Economics concentration offers students a great deal of flexibility with 18 Agricultural Economics electives allowing the student to design their focus within the department and developing a strong foundation in economic theory.

Agricultural Economics Website

Agricultural Economics Major Change (CODO) Requirements

Degree Requirements
120 Credits Required

Departmental/Program Major Courses (54 credits)

Major Required Courses (13 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- AGEC 30300 - Intermediate Applied Microeconomics Credits: 3.00

Applied Agricultural Economics Concentration Courses (21 credits)

- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00
- Agricultural Economics Selective (AGEC 10000:59900) - Credit Hours: 18.00

AGEC Departmental Selectives (20 credits)

- AGEC Biological Science Selective - Credit Hours: 8.00
- AGEC Economics Selective (meets CoA Upper level Humanities/Social Science requirement) - Credit Hours: 9.00
- AGEC Mathematics or Science Selective - Credit Hours: 3.00

Agricultural Economics Department Supplemental Information

Other Departmental/Program Course Requirements (43-44 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
- MGMT 20000 - Introductory Accounting Credits: 3.00 or
- MGMT 21200 - Business Accounting Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
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- Science, Technology & Society Selective - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective - Credit Hours: 3.00
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (22-23 credits)
• Electives - Credit Hours: 22.00-23.00

Supplemental List
Agricultural Economics Department Supplemental Information

GPA Requirements
• 2.0 GPA required for Bachelor of Science degree.

Course Requirements and Notes
• Students **must complete a College of Agriculture capstone course**. This course can be one of Agricultural Economics' Capstone Courses (AGEC 41100, 42700, 43000, 43100, or 49900) or any approved College of Agriculture capstone course.

Transfer Credit Policy
• Transfer courses listed in the **Purdue Transfer Equivalency Guide** with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

College of Agriculture & University Level Requirements
• College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy
College of Agriculture Undergraduate Pass/No Pass Policy
Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

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University Core Requirements

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Civics Literacy Proficiency Requirement

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Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

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- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.
Sample 4-Year Plan

Fall 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- MA 16010 - Applied Calculus I Credits: 3.00 ♦
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Oral Communication Selective - Credit Hours: 3.00
- Science, Technology, & Society Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00
- Written or Oral Communication Selective - Credit Hours: 3.00

16 Credits

Spring 2nd Year

- AGEC 30300 - Intermediate Applied Microeconomics Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Agricultural Economics Selective (AGEC 10000:59900) - Credit Hours: 3.00
<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 3rd Year</td>
<td>AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or AGEC 45100 - Applied Econometrics Credits: 3.00</td>
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<td>Agricultural Economics Selective (AGEC 10000:59900) - Credit Hours: 3.00</td>
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<td>AGEC Economics Selective - Credit Hours: 3.00</td>
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<td>Humanities or Social Science Selective - Credit Hours: 3.00</td>
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<td>Elective - Credit Hours: 3.00</td>
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<td>15 Credits</td>
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<td>Spring 3rd Year</td>
<td>AGEC Mathematics or Science Selective - Credit Hours: 3.00</td>
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<td>Agricultural Economics Selective (AGEC 10000:59900) - Credit Hours: 6.00</td>
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<td></td>
<td>Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00</td>
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<td>Elective - Credit Hours: 3.00</td>
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<td>15 Credits</td>
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<td>Fall 4th Year</td>
<td>Agricultural Economics Selective (AGEC 10000:59900) - Credit Hours: 3.00</td>
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<td>AGEC Economics Selective - Credit Hours: 3.00</td>
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<td>Humanities or Social Science Selective - Credit Hours: 3.00</td>
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<td>Electives - Credit Hours: 6.00</td>
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<td>15 Credits</td>
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<td>Spring 4th Year</td>
<td>Agricultural Economics Selective (AGEC 10000:59900) - Credit Hours: 3.00</td>
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<td>AGEC Economics Selective - Credit Hours: 3.00</td>
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<td>Electives - Credit Hours: 7.00-8.00</td>
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<tr>
<td>13-14 Credits</td>
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</table>

**Pre-Requisite Information**

For pre-requisite information, log in to mypurdue.purdue.edu and click here.
World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Agricultural Economics: Data Analytics Concentration, BS

About the Program

Students completing a degree in Agricultural Economics must choose a concentration from four choices: Applied Agricultural Economics, Data Analytics, Policy and Pre-Law, and Quantitative Analysis. The Data Analytics concentration requires students to complete courses in optimization, econometrics, and data analysis and applications. With a growing demand for individuals who understand data, there are numerous career opportunities across a vast number of industries.

Agricultural Economics (website)

Agricultural Economics Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (54 credits)

Required Major Courses (13 credits)
• AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
• AGEC 21700 - Economics Credits: 3.00
• AGEC 29800 - Careers In Agribusiness Credits: 1.00
• AGEC 30300 - Intermediate Applied Microeconomics Credits: 3.00

Data Analytics Concentration Courses (24 credits)

• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• AGEC 37500 - The Process Of Economic Research Credits: 1.00
• AGEC 45100 - Applied Econometrics Credits: 3.00
• AGR 33300 - Data Science For Agriculture Credits: 3.00
• AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
• AGEC 49900 - Thesis Credits: 1.00 to 6.00 or
• TDM 41100 - Corporate Partners VII Credits: 3.00 and
• TDM 41200 - Corporate Partners VIII Credits: 3.00 (Capstone) - Credit Hours: 5.00-6.00
• TDM 10100 - The Data Mine Seminar I Credits: 1.00
• TDM 10200 - The Data Mine Seminar II Credits: 1.00
• Data Analytics Concentration Selectives - Credit Hours: 3.00-4.00 (no more than 3 credits from CS courses)

AGEC Departmental Selectives (17 credits)

• AGEC Biological Science Selective - Credit Hours: 8.00 (see list in supplemental)
• AGEC Economics Selective - Credit Hours: 6.00 (see list in supplemental) (meets CoA Upper level Humanities/Social Science requirement)
• AGEC Mathematics or Science Selective - Credit Hours: 3.00

Agricultural Economics Department Supplemental Information

Other Departmental/Program Course Requirements (43-44 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 ♦ (satisfies Quantitative Reasoning for core)
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
• MGMT 21200 - Business Accounting Credits: 3.00 ♦
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Science, Technology & Society Selective - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective - Credit Hours: 3.00
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (22-23 credits)
• Elective - Credit Hours: 22.00-23.00

College of Agriculture & University Level Requirements
• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy
Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements
• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements
For a complete listing of University Core Course Selectives, visit the Provost's Website.
• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Program Requirements

Fall 1st Year

- **AGEC 20300 - Introductory Microeconomics For Food And Agribusiness** Credits: 3.00 ♦
- **AGR 10100 - Introduction To The College Of Agriculture And Purdue University** Credits: 0.50
- **AGR 11200 - Introduction To Agricultural Economics Academic Programs** Credits: 0.50
- **MA 16010 - Applied Calculus I** Credits: 3.00
- **AGEC Biological Science Selective -** Credit Hours: 4.00
- **Written Communication Selective -** Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

14-15 Credits

Spring 1st Year

- **AGEC 20201 - Introduction To Data Analytics For Agricultural Business** Credits: 3.00
- **AGEC 21700 - Economics** Credits: 3.00
- **AGEC Biological Sciences Selective -** Credit Hours: 4.00
- **Oral Communication Selective -** Credit Hours: 3.00
- **Science, Technology, & Society Selective -** Credit Hours: 3.00
16 Credits

Fall 2nd Year

- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- CHM 11100 - General Chemistry Credits: 3.00♦
- STAT 30100 - Elementary Statistical Methods Credits: 3.00♦
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00
- Written or Oral Communication Selective - Credit Hours: 3.00

16 Credits

Spring 2nd Year

- AGEC 30300 - Intermediate Applied Microeconomics Credits: 3.00
- AGEC 37500 - The Process Of Economic Research Credits: 1.00
- AGEC 45100 - Applied Econometrics Credits: 3.00
- AGR 33300 - Data Science For Agriculture Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00♦
- MGMT 20000 - Introductory Accounting Credits: 3.00♦ or
- MGMT 21200 - Business Accounting Credits: 3.00♦

16 Credits

Fall 3rd Year

- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
- AGEC 49900 - Thesis Credits: 1.00 to 6.00 Credit Hours: 2.00-3.00 or
- TDM 41100 - Corporate Partners VII Credits: 3.00
- TDM 10100 - The Data Mine Seminar I Credits: 1.00
- Data Science Selective - Credit Hours: 3.00-4.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

15-17 Credits

Spring 3rd Year

- AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
- AGEC 49900 - Thesis Credits: 1.00 to 6.00 or
- TDM 41200 - Corporate Partners VIII Credits: 3.00 - Credit Hours: 3.00
- TDM 10200 - The Data Mine Seminar II Credits: 1.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

16 Credits

Fall 4th Year

• AGEC Economics Selective - Credit Hours: 3.00
• Mathematics or Science Selective - Credit Hours: 3.00
• Electives - Credit Hours: 6.00

12 Credits

Spring 4th Year

• AGEC Economics Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Electives - Credit Hours: 7.00-8.00

13-14 Credits

Notes

• 2.0 GPA required for Bachelor of Science degree.
• Consultation with an advisor may result in an altered plan customized for an individual student.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."
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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Agricultural Economics: Policy and Pre-Law Concentration, BS

About the Program

Students completing a degree in Agricultural Economics must choose a concentration from four choices: Applied Agricultural Economics, Data Analytics, Policy and Pre-Law, and Quantitative Analysis. The Policy and Pre-Law concentration requires students to complete the Undergraduate Honors Program, and courses in agricultural policy, law, and advanced economic theory. Many of these students complete internships and then full-time positions in Washington D.C., local and state government offices and commodity groups, etc.

Agricultural Economics Website

Agricultural Economics Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (54 credits)

Major Required Courses (13 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- AGEC 30300 - Intermediate Applied Microeconomics Credits: 3.00

Policy and Pre-Law Concentration Courses (24 credits)

- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
• AGEC 45100 - Applied Econometrics Credits: 3.00
• AGEC 37500 - The Process Of Economic Research Credits: 1.00
• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
• AGEC 41000 - Agricultural Policy Credits: 3.00
• AGEC 49900 - Thesis Credits: 1.00 to 6.00 (Capstone)
• AGEC 45500 - Agricultural Law Credits: 3.00 or
• MGMT 45500 - Legal Background For Business I Credits: 3.00
• Policy and Pre-Law Concentration Selectives - Credit Hours: 6.00

AGEC Departmental Selectives (17 credits)

• AGEC Biological Science Selective - Credit Hours: 8.00
• AGEC Economics Selective - Credit Hours: 6.00 (meets CoA level Humanites/Social Science requirement)
• AGEC Mathematics or Science Selective - Credit Hours: 3.00

Agricultural Economics Department Supplemental Information

Other Departmental/Program Course Requirements (43 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 ♦ (satisfies Quantitative Reasoning for core)
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
• MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
• MGMT 21200 - Business Accounting Credits: 3.00 ♦
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Science, Technology & Society Selective - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective - Credit Hours: 3.00
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (23 credits)

• Electives - Credit Hours: 23.00

Supplemental List

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.
Course Requirements and Notes

- Students must complete a College of Agriculture capstone course. This course can be one of Agricultural Economics' Capstone Courses (AGEC 41100, 42700, 43000, 43100, or 49900) or any approved College of Agriculture capstone course.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

Program Requirements

Fall 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- MA 16010 - Applied Calculus I Credits: 3.00 ♦
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Written Communication Selective - Credit Hours: 3.00

14-15 Credits
Spring 1st Year

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Oral Communication Selective - Credit Hours: 3.00
- Science, Technology, & Society Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- CHM 11100 - General Chemistry Credits: 3.00♦
- STAT 30100 - Elementary Statistical Methods Credits: 3.00♦
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00
- Written or Oral Communication Selective - Credit Hours: 3.00

16 Credits

Spring 2nd Year

- AGEC 30300 - Intermediate Applied Microeconomics Credits: 3.00
- AGEC 37500 - The Process Of Economic Research Credits: 1.00
- CHM 11200 - General Chemistry Credits: 3.00♦
- MGMT 20000 - Introductory Accounting Credits: 3.00♦ or
- Elective - Credit Hours: 3.00
- MGMT 21200 - Business Accounting Credits: 3.00
- Policy and Pre-Law Concentration Selective - Credit Hours: 3.00

16 Credits

Fall 3rd Year

- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00
- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00
- AGEC 49900 - Thesis Credits: 1.00 to 6.00 - Credit Hours: 2.00
14 Credits

Spring 3rd Year

- AGEC 41000 - Agricultural Policy Credits: 3.00
- AGEC 49900 - Thesis Credits: 1.00 to 6.00 - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

15 Credits

Fall 4th Year

- MGMT 45500 - Legal Background For Business I Credits: 3.00
  or
- AGEC Economics Selective - Credit Hours: 3.00
- Policy and Pre-Law Concentration Selectives - Credit Hours: 3.00
- AGEC Mathematics or Science Selective - Credit Hours: 3.00
- Electives - Credit Hours: 3.00
- AGEC 45500 - Agricultural Law Credits: 3.00

15 Credits

Spring 4th Year

- Agricultural Economics Selective (AGEC 10000:59900) - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+level) - Credit Hours: 3.00
- Electives - Credit Hours: 7.00-8.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course
The course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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Farm Management, BS

About the Program

Farm Management prepares people for managing the home farm, professional farm management, or understanding the challenge of managing a farm. Emphasis is placed on production, finance, marketing, and management strategies.

Agricultural Economics Website

Farm Management Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (61 credits)

Required Major Courses (29 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
Major Selectives (18 credits)

- Farm Management Business Selective - Credit Hours: 3.00
- Farm Management Business Selective - Credit Hours: 3.00
- Farm Management Business Selective - Credit Hours: 3.00
- Production Agriculture Selective - Credit Hours: 3.00
- Production Agriculture Selective - Credit Hours: 3.00
- Production Agriculture Selective - Credit Hours: 3.00

AGEC Department Selectives (14 credits)

- AGEC Biological Science Selective - Credit Hours: 8.00
- AGEC Economics Selective (meets CoA Upper level Humanities/Social Science requirement) - Credit Hours: 3.00
- AGEC Mathematics or Science Selective - Credit Hours: 3.00

Other Departmental /Program Course Requirements (43-44 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 ♦ (satisfies Quantitative Reasoning for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Science, Technology & Society Selective - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- Written or Oral Communications Selective - Credit Hours: 3.00
- Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (15-16 credits)
Electives - Credit Hours: 15.00-16.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00
- Elective - Credit Hours: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

16-17 Credits

Spring 1st Year

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00
• Science, Technology, & Society Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00

15 Credits

Fall 2nd Year

• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
• AGEC 29800 - Careers In Agribusiness Credits: 1.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• AGEC Biological Science Selective - Credit Hours: 4.00
• Production Agriculture Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00

15 Credits

Spring 2nd Year

• AGEC 31000 - Farm Organization Credits: 3.00
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00
• AGEC Biological Science Selective - Credit Hours: 4.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Written or Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 3rd Year

• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
• AGEC 45100 - Applied Econometrics Credits: 3.00
• Farm Management Business Selective - Credit Hours: 3.00
• Humanities and Social Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• AGEC Economics Selective - Credit Hours: 3.00
• AGEC Mathematics or Science Selective - Credit Hours: 3.00
• Farm Management Business Selective - Credit Hours: 3.00
• Production Agriculture Selective - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

15 Credits

Fall 4th Year

• AGEC 41100 - Farm Management Credits: 4.00
• Written or Oral Communication Selective - Credit Hours: 3.00
• AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
• Production Agriculture Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+level) - Credit Hours: 3.00

16 Credits

Spring 4th Year

• Farm Management Business Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Electives - Credit Hours: 5.00-6.00

11-12 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer
The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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**Sales and Marketing, BS**

*About the Program*

Sales and marketing graduates complete a degree program with a focus in sales, marketing, and management that give them the ability to enter numerous entry-level sales positions for agricultural and non-agricultural firms. These positions lead to professional careers in sales or marketing management. A wide spectrum of agricultural marketing organizations, food manufacturing companies, and farm supply industries are marketing-oriented and depend extensively on agricultural graduates who are well-trained in marketing tools and concepts.

Agricultural Economics Website

Sales and Marketing Major Change (CODO) Requirements

**Degree Requirements**

**120 Credits Required**

**Departmental/Program Major Courses (55 credits)**

**Required Major Courses (38 credits)**

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00 (Capstone)
• AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00 (Capstone)
• AGEC 43100 - Advanced Industrial Sales And Marketing Credits: 4.00 (Capstone)
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
• AGEC 45100 - Applied Econometrics Credits: 3.00

Communication Marketing Selective (3 credits)

• COM 21200 - Approaches To The Study Of Interpersonal Communication Credits: 3.00
• COM 25300 - Introduction To Public Relations Credits: 3.00
• COM 25600 - Introduction To Advertising Credits: 3.00
• COM 31800 - Principles Of Persuasion Credits: 3.00
• COM 32000 - Small Group Communication Credits: 3.00
• COM 32400 - Introduction To Organizational Communication Credits: 3.00
• COM 32500 - Interviewing: Principles And Practice Credits: 3.00

AGEC Department Selectives (14 credits)

• AGEC Biological Science Selective - Credit Hours: 8.00
• AGEC Economics Selective (meets CoA Upper level Humanities/Social Science requirement) - Credit Hours: 3.00
• AGEC Mathematics or Science Selective - Credit Hours: 3.00

Agricultural Economics Department Supplemental Information

Other Departmental /Program Course Requirements (46-47 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MGMT 45500 - Legal Background For Business I Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
• MGMT 20000 - Introductory Accounting Credits: 3.00 ♦
• MGMT 21200 - Business Accounting Credits: 3.00 ♦
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Science, Technology and Society Selective - Credit Hours: 3.00 (satisfies Science, Technology and Society for core)
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective - Credit Hours: 3.00
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (18-19 credits)

• Elective - Credit Hours: 18.00-19.00
Supplemental List

- Agricultural Economics Department Supplemental Information

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

- College, department, major transfer credit (including any/all undistributed credit, TR graded course, AP/IB credit, etc.) should be clearly stated. Can transfer credit be applied to the major? If yes, how and where?

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements
University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11200 - Introduction To Agricultural Economics Academic Programs Credits: 0.50
- MA 16010 - Applied Calculus I Credits: 3.00
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00
14-15 Credits

Spring 1st Year

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- AGEC Biological Sciences Selective - Credit Hours: 4.00
- Science, Technology, & Society Selective - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 29800 - Careers In Agribusiness Credits: 1.00
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
- Communication Marketing Selective - Credit Hours: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00

16 Credits

Spring 2nd Year

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- MGMT 20000 - Introductory Accounting Credits: 3.00 ♦ or
- MGMT 21200 - Business Accounting Credits: 3.00 ♦
- Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Fall 3rd Year

- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00 or
- AGEC 45100 - Applied Econometrics Credits: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
- Elective - Credit Hours: 3.00
15 Credits

Spring 3rd Year

- MGMT 45500 - Legal Background For Business I Credits: 3.00
- AGEC Economics Selective - Credit Hours: 3.00
- AGEC Mathematics or Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

15 Credits

Fall 4th Year

- AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
- AGEC 43100 - Advanced Industrial Sales And Marketing Credits: 4.00
  Written or Oral Communication Selective - Credit Hours: 3.00
- Electives - Credit Hours: 6.00

16 Credits

Spring 4th Year

- AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Electives - Credit Hours: 6.00-7.00

13 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS-Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to
Persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program.

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Certificate

Industrial Selling Certificate

The Certificate in Industrial Selling is open to students in any major who are interested in Industrial Selling.

It has three required courses and a capstone course, totaling thirteen credit hours. Each certificate earner must also complete a day long industry sales experience with a B2B sales practitioner in their area of professional interest, and must participate in a sales or marketing oriented experience on campus. It is expected that additional courses (sales management, negotiations, etc.) will be developed over time as alternatives and complements to this set of initial courses.

Requirements for the Certificate (13 credits)

Required Courses (9 credits)

- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- CSR 31500 - Relationship Selling Credits: 3.00

Capstone Course (4 credits)

- AGEC 43100 - Advanced Industrial Sales And Marketing Credits: 4.00

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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**Minor**

**Farm Management Minor**

Requirements for the Minor (18 credits)

**Required Courses (13 credits)**

- AGEC 31000 - Farm Organization **Credits: 3.00**
- AGEC 41100 - Farm Management **Credits: 4.00**
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness **Credits: 3.00 or**
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy **Credits: 3.00 or**
- ECON 25100 - Microeconomics **Credits: 3.00**
- MGMT 20000 - Introductory Accounting **Credits: 3.00 or**
- MGMT 21200 - Business Accounting **Credits: 3.00**

**Selective Courses (5 credits)**

- AGEC 22000 - Economics Of Agricultural Markets **Credits: 3.00**
- AGEC 30500 - Agricultural Prices **Credits: 3.00**
- AGEC 32100 - Principles Of Commodity Marketing **Credits: 3.00**
- AGEC 33100 - Principles Of Industrial Selling **Credits: 3.00**
- AGEC 35200 - Quantitative Techniques For Firm Decision Making **Credits: 3.00**
- AGEC 41000 - Agricultural Policy **Credits: 3.00**
- AGEC 41200 - Farm Business Management Workshop **Credits: 1.00 to 3.00**
- AGEC 42100 - Advanced Commodity Marketing **Credits: 3.00**
- AGEC 42400 - Financial Management Of Agricultural Business **Credits: 3.00**
- AGEC 42500 - Estate Planning And Property Transfer **Credits: 3.00**
- AGEC 45600 - Federal Income Tax Law **Credits: 3.00**
- AGEC 45000 - International Agricultural Trade **Credits: 3.00**
- AGEC 52400 - Agricultural Finance **Credits: 3.00**
- AGEC 45500 - Agricultural Law **Credits: 3.00 or**
- MGMT 45500 - Legal Background For Business I **Credits: 3.00**
- MGMT 44301 - Management Of Human Resources **Credits: 3.00 or**
- MGMT 44362 - Leadership In A Changing World **Credits: 3.00 or**
- TLI 11200 - Foundations Of Organizational Leadership **Credits: 3.00 or**
- TLI 15200 - Business Principles For Organizational Leadership **Credits: 3.00**

**Notes**

- Department permission is not required to enroll in this minor.
• The required 18 credits are beyond the three-credit economics selective that is a part of core requirements for students in the College of Agriculture. For students from programs outside of the College of Agriculture, three credits of an economics selective are required in addition to the 18 credits noted above.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Food and Agribusiness Management Minor

Requirements for the Minor (18 credits)

Required Courses (9 credits)

• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00
• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00 or
• MGMT 20100 - Management Accounting I Credits: 3.00
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00

Selective Courses (9 credits)

Agricultural Economics (AGEC) courses - At least 6 credits

• AGEC 30500 - Agricultural Prices Credits: 3.00
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• AGEC 41000 - Agricultural Policy Credits: 3.00
• AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
• AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
• AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
• AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
• AGEC 43100 - Advanced Industrial Sales And Marketing Credits: 4.00
• AGEC 45000 - International Agricultural Trade Credits: 3.00
• AGEC 45100 - Applied Econometrics Credits: 3.00
• AGEC 52400 - Agricultural Finance Credits: 3.00
• HORT 43500 - Developing An Agricultural Startup Credits: 4.00
• AGEC 45500 - Agricultural Law Credits: 3.00 or
• MGMT 45500 - Legal Background For Business I Credits: 3.00
• MGMT 44301 - Management Of Human Resources Credits: 3.00 or
• MGMT 44362 - Leadership In A Changing World Credits: 3.00 or
• TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00 or
• TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00
• MGMT Courses (20000-59900) - Credit Hours: 3.00
• OLS Courses (20000-59900) - Credit Hours: 3.00

Notes

• Department permission is not required to enroll in this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Global Food and Agriculture Systems Minor

About this Program:

This minor will provide students a course of study emphasizing the global development, policy, and sustainability of the food and agribusiness industry.

Requirements for the Minor (18 credits)

Required Courses (6 credits)

• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00 or
• ECON 34000 - Intermediate Microeconomic Theory Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00 or
Elective Courses - Choose Four (12 credits)

- ECON 25200 - Macroeconomics Credits: 3.00

Additional Courses - Choose Four (12 credits)

- AGEC 25000 - Economic Geography Of World Food And Resources Credits: 3.00
- AGEC 30500 - Agricultural Prices Credits: 3.00
- AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
- AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 34000 - International Economic Development Credits: 3.00
- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
- AGEC 41000 - Agricultural Policy Credits: 3.00
- AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
- AGEC 45000 - International Agricultural Trade Credits: 3.00
- AGEC 52600 - International Food And Agribusiness Marketing Strategy Credits: 3.00
- AGEC 53200 - World Food Problems Credits: 3.00

Notes

- Department Permission is not required to enroll in this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Non-Degree

Agricultural Economics Department Supplemental Information

College of Agriculture: Biological Science Selective (8 credits)

To fulfill the biological sciences core requirement, all students must complete at least two hours of laboratory credit in biological sciences each week for 32 weeks, or equivalent. Completion of course sequences is recommended. Courses with an (*) have a laboratory component.

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 *
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 *
• BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
• BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
• BIOL 13500 - First Year Biology Laboratory Credits: 2.00 *
• BIOL 20300 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 20400 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 22100 - Introduction To Microbiology Credits: 4.00 *
• BIOL 23000 - Biology Of The Living Cell Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00 *
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00 *
• BIOL 29500 - Special Assignments Credits: 0.00 to 18.00 (Title: Quantitative Biology of the Living Cell)
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 *
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• HORT 30100 - Plant Physiology Credits: 4.00 *

AGEC Economics Selective (3 credits)

• AGEC 30500 - Agricultural Prices Credits: 3.00
• AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
• AGEC 34000 - International Economic Development Credits: 3.00
• AGEC 45000 - International Agricultural Trade Credits: 3.00
• AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
• AGEC 41000 - Agricultural Policy Credits: 3.00
• ECON 30000:59999

AGEC Food and Agribusiness Management Selective (3 credits)

• AGEC 31000 - Farm Organization Credits: 3.00
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
• AGEC 41100 - Farm Management Credits: 4.00
• AGEC 41200 - Farm Business Management Workshop Credits: 1.00 to 3.00
• AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
• AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00
• AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
• AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
- **AGEC 43000** - Agricultural And Food Business Strategy **Credits:** 3.00
- **AGEC 43100** - Advanced Industrial Sales And Marketing **Credits:** 4.00
- **AGEC 45500** - Agricultural Law **Credits:** 3.00
- **AGEC 45600** - Federal Income Tax Law **Credits:** 3.00
- **AGEC 52400** - Agricultural Finance **Credits:** 3.00
- **AGEC 52600** - International Food And Agribusiness Marketing Strategy **Credits:** 3.00
- **CSR 20900** - Introduction To Retail Management **Credits:** 3.00
- **CSR 28200** - Customer Relations Management **Credits:** 3.00
- **CSR 30900** - Leadership Strategies **Credits:** 3.00
- **CSR 31500** - Relationship Selling **Credits:** 3.00
- **CSR 33100** - Consumer Behavior **Credits:** 3.00
- **CSR 33200** - Cross-Cultural Marketing And International Retailing **Credits:** 3.00
- **CSR 34200** - Personal Finance **Credits:** 3.00
- **CSR 34400** - Fundamentals Of Negotiations **Credits:** 3.00
- **CSR 38600** - Risk Management **Credits:** 3.00
- **CSR 40400** - Strategic Management For Service Industries **Credits:** 3.00
- **CSR 41500** - Sales Force Management **Credits:** 3.00
- **CSR 48100** - Ethics And Behaviors In Financial Planning **Credits:** 3.00
- **HORT 43500** - Developing An Agricultural Startup **Credits:** 4.00
- **TLI 11200** - Foundations Of Organizational Leadership **Credits:** 3.00
- **TLI 15200** - Business Principles For Organizational Leadership **Credits:** 3.00
- **ENTR 20000:59999**
- **MGMT 20100:59999**
- **IET 20000:59999**
- **OBHR 20000:59999**
- **OLS 25200:59999**
- **TLI 20000:59999**

**College of Agriculture: Additional Mathematics or Science Selectives**

- **AGR 33300** - Data Science For Agriculture **Credits:** 3.00
- **AGEC 35200** - Quantitative Techniques For Firm Decision Making **Credits:** 3.00
- **AGEC 45100** - Applied Econometrics **Credits:** 3.00
- **AGRY 12500** - Environmental Science And Conservation **Credits:** 3.00
- **AGRY 25500** - Soil Science **Credits:** 3.00
- **AGRY 27000** - Forest Soils **Credits:** 3.00
- **AGRY 32000** - Genetics **Credits:** 3.00
- **AGRY 32100** - Genetics Laboratory **Credits:** 1.00
- **AGRY 33500** - Weather And Climate **Credits:** 3.00
- **AGRY 36500** - Soil Fertility **Credits:** 3.00
- **AGRY 38500** - Environmental Soil Chemistry **Credits:** 4.00
- **AGRY 46500** - Soil Physical Properties **Credits:** 3.00
- **ANSC 22100** - Principles Of Animal Nutrition **Credits:** 3.00
- **ANSC 23000** - Physiology Of Domestic Animals **Credits:** 4.00
- **BCHM 10000** - Introduction To Biochemistry **Credits:** 2.00
- **BCHM 30700** - Biochemistry **Credits:** 3.00
- **BCHM 30900** - Biochemistry Laboratory **Credits:** 1.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
- BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
- CHM 22400 - Introductory Quantitative Analysis Credits: 4.00
- CHM 25700 - Organic Chemistry Credits: 4.00
- CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
- CHM 26100 - Organic Chemistry I Credits: 3.00
- CHM 26200 - Organic Chemistry II Credits: 3.00
- CHM 26300 - Organic Chemistry Laboratory I Credits: 1.00
- CHM 26400 - Organic Chemistry Laboratory II Credits: 1.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- CS 18000 - Problem Solving And Object-Oriented Programming Credits: 4.00
- EAPS 11100 - Physical Geology Credits: 3.00
- EAPS 11200 - Earth Through Time Credits: 3.00
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00
- EAPS 22100 - Survey Of Atmospheric Science Credits: 3.00
- ENTM 10200 - The Practice Of Science Credits: 2.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
- ENTM 24200 - Data Science Credits: 3.00
- ENTM 25300 - Insect Physiology And Biochemistry Credits: 4.00
- ENTM 30100 - Experimentation And Analysis Credits: 3.00
- ENTM 31200 - Plant-Insect Chemical Ecology Credits: 3.00
- ENTM 32810 - Practical Molecular Biology Credits: 3.00
- ENTM 35300 - Insecticides And Environment Credits: 3.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- FNR 20100 - Marine Biology Credits: 3.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 24000 - Wildlife In America Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- HONR 49900 - Honors Research Project Credits: 1.00 to 6.00 (Title: Human Diseases and Disorders)
- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00
- MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- MA 26100 - Multivariate Calculus Credits: 4.00
- MA 26500 - Linear Algebra Credits: 3.00
- NRES 12500 - Environmental Science And Conservation Credits: 3.00
- NRES 23000 - Survey Of Meteorology Credits: 3.00
- NRES 25500 - Soil Science Credits: 3.00
- PHYS 17200 - Modern Mechanics Credits: 4.00
- PHYS 21400 - The Nature Of Physics Credits: 3.00
- PHYS 22000 - General Physics Credits: 4.00
- PHYS 22100 - General Physics Credits: 4.00
- PHYS 23300 - Physics For Life Sciences I Credits: 4.00
- PHYS 23400 - Physics For Life Sciences II Credits: 4.00
- PHYS 24100 - Electricity And Optics Credits: 3.00
- STAT 22500 - Introduction To Probability Models Credits: 3.00
- STAT 50200 - Experimental Statistics II Credits: 3.00
- STAT 51100 - Statistical Methods Credits: 3.00
- STAT 51200 - Applied Regression Analysis Credits: 3.00

Data Analytics Concentration Selectives (11 credits)

(No more than 3 credits from CS course)

- AGEC 30500 - Agricultural Prices Credits: 3.00
- AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
- ENTM 24200 - Data Science Credits: 3.00
- CS 10100 - Digital Literacy Credits: 3.00
- CS 15900 - C Programming Credits: 3.00
- CS 17700 - Programming With Multimedia Objects Credits: 4.00
- HORT 53000 - Introduction To Computing For Biologists Credits: 3.00
- ILS 23000 - Data Science And Society: Ethical Legal Social Issues Credits: 3.00
- ILS 29500 - Special Topics In Information And Data Science Credits: 1.00 to 4.00
- MGMT 28800 - Programming For Business Applications Credits: 3.00
- MGMT 47300 - Data Mining Credits: 3.00
- MGMT 47400 - Predictive Analytics Credits: 3.00
- MGMT 47900 - Data Visualization Credits: 2.00 or 3.00
- PHIL 20700 - Ethics For Technology, Engineering, And Design Credits: 3.00
- PHIL 20800 - Ethics Of Data Science Credits: 3.00

Policy & Pre-Law Concentration Selectives (6 credits)

- AGEC 45000 - International Agricultural Trade Credits: 3.00
- AGEC 45600 - Federal Income Tax Law Credits: 3.00
• AGEC 49800 - Special Problems Credits: 1.00 to 3.00
• AGEC 52500 - Environmental Policy Analysis Credits: 3.00
• COM 35200 - Mass Communication Law Credits: 3.00
• COM 21000 - Addressing Public Issues Credits: 3.00
• ECON 36100 - Antitrust And Regulation Credits: 3.00
• ECON 36700 - Law And Economics Credits: 3.00
• ECON 42200 - Public Finance And Taxation Credits: 3.00
• FS 34000 - Introduction To Food Law And Regulations Credits: 1.00
• MGMT 33100 - Development And Impact of Equal Employment Law Credits: 3.00
• MGMT 45600 - Legal Foundations For Business II Credits: 3.00
• PHIL 11000 - The Big Questions: Introduction To Philosophy Credits: 3.00
• PHIL 11400 - Global Moral Issues Credits: 3.00
• PHIL 12000 - Critical Thinking Credits: 3.00
• PHIL 15000 - Principles Of Logic Credits: 3.00
• POL 22200 - Women, Politics, And Public Policy Credits: 3.00
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• POL 31400 - The President And Policy Process Credits: 3.00
• PHIL 26000 - Philosophy And Law Credits: 3.00
• POL 36000 - Women And The Law Credits: 3.00
• POL 42300 - International Environmental Policy Credits: 3.00
• POL 42500 - Environmental Law And Politics Credits: 3.00
• POL 43500 - International Law Credits: 3.00
• SOC 41900 - Sociology Of Law Credits: 3.00

Farm Management Supplemental Information

College of Agriculture: Biological Science Selective (8 credits)

To fulfill the biological sciences core requirement, all students must complete at least two hours of laboratory credit in biological sciences each week for 32 weeks, or equivalent. Completion of course sequences is recommended. Courses with an (*) have a laboratory component.

• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 *
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 *
• BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
• BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
• BIOL 13500 - First Year Biology Laboratory Credits: 2.00 *
• BIOL 20300 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 20400 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 22100 - Introduction To Microbiology Credits: 4.00 *
• BIOL 23000 - Biology Of The Living Cell Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00 *
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00 *
• BIOL 29500 - Special Assignments Credits: 0.00 to 18.00 (Title: Quantitative Biology of the Living Cell)
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 *
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
- HORT 30100 - Plant Physiology Credits: 4.00 *

Economics Selective (3 credits)

- ECON 30000:59999
- AGEC 30500 - Agricultural Prices Credits: 3.00
- AGEC 34000 - International Economic Development Credits: 3.00
- AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 40600 - Natural Resource And Environmental Economics Credits: 3.00
- AGEC 41000 - Agricultural Policy Credits: 3.00
- AGEC 45000 - International Agricultural Trade Credits: 3.00

Farm Management Business Selective (9 credits)

- ENTR 20000:59999
- IET 20000:59999
- MGMT 20100:59999
- OBHR 20000:59999
- OLS 20000:59999
- TLI 20000:59999
- AGEC 28900 - Foundational Internship Credits: 1.00
- AGEC 30500 - Agricultural Prices Credits: 3.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 41000 - Agricultural Policy Credits: 3.00
- AGEC 41200 - Farm Business Management Workshop Credits: 1.00 to 3.00
- AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
- AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00
- AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
- AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
- AGEC 45500 - Agricultural Law Credits: 3.00
- AGEC 45600 - Federal Income Tax Law Credits: 3.00
- AGEC 52400 - Agricultural Finance Credits: 3.00
- TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
- TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00

Production Agriculture Selective (9 credits)

- AGRY 10500 - Crop Production Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 33500 - Weather And Climate Credits: 3.00
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<td>Crop Production Systems</td>
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<td>AGRY 50500</td>
<td>Forage Management</td>
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<td>AGRY 51000</td>
<td>Turfgrass Science</td>
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<td>Integrated Turfgrass Systems</td>
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<td>AGRY 52500</td>
<td>Crop Physiology And Ecology</td>
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<td>ANSC 22100</td>
<td>Principles Of Animal Nutrition</td>
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<td>Physiology Of Domestic Animals</td>
<td>4.00</td>
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<td>Principles Of Animal Production</td>
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<td>ANSC 32500</td>
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<td>Swine Management</td>
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<td>BTNY 30100</td>
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<td>Plant Propagation</td>
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<td>HORT 31900</td>
<td>Controlled Environment Production Of Horticultural Crops</td>
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<td>SFS 30100</td>
<td>Agroecology</td>
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</table>
Department of Agricultural Sciences Education and Communication

Overview

The Department of Agricultural Sciences Education and Communication prepares professionals for rewarding careers supporting the food and agricultural industry.

Our Agricultural Communication Program prepares students as professional communicators for agricultural and natural resource organizations, agribusiness, government agencies, and advertising and public relations agencies.

Our Agricultural Education Program prepares teachers who help people learn about food and natural resources in schools and other settings. Agricultural Education graduates are highly sought after in business, government and other fields where professionals are needed to train and work with people.

All of our students receive personalized advising from caring staff and faculty with professional experience in their fields. We connect students with exciting and transformational experiences through study abroad, internships, student teaching, undergraduate research and more. The Department of Agricultural Sciences Education and Communication is also home to a nationally recognized graduate program focused on learning and communication in the context of agriculture, food, natural resources and science.

Department of Agricultural Sciences Education and Communication (website)

Faculty (website)

Contact Information

Agricultural Sciences Education and Communication

Purdue University
Lilly Hall of Life Sciences (LILY)
915 Mitch Daniels Blvd.
West Lafayette, IN 47907

Main Office: Lilly Hall of Life Sciences (LILY) 3rd Floor, Room 3-230

Phone: (765) 494-8423

Email: Amanda Delio
Graduate Information

For Graduate Information please see Agricultural Sciences Education and Communication Graduate Program Information.

Bachelor of Science

Agricultural Communication, BS

About the Program

Prepare for a professional career serving industry and society by promoting awareness and understanding of food, agriculture, natural resources and science. In Agricultural Communication, you will receive excellent advising from caring staff. You will develop marketable communication skills through a flexible curriculum, diverse coursework and competitive internships. Our graduates are professional communicators for agricultural organizations, agribusiness firms, government, mass media, and advertising and public relations agencies.

Agricultural Communication Website

Agricultural Communication Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (24 credits)

Required Major Courses (24 credits)

- ASEC 15200 - Agricultural Communication Seminar Credits: 3.00
- ASEC 28000 - Digital Storytelling Credits: 3.00
- ASEC 38000 - Feature Writing And Production Credits: 3.00
- ASEC 48000 - Agricultural Communication Capstone Seminar Credits: 3.00
- COM 20400 - Critical Perspectives On Communication Credits: 3.00
- COM 25200 - Writing For Mass Media Credits: 3.00
- COM 31100 - Copy Editing Credits: 3.00
- COM 31800 - Principles Of Persuasion Credits: 3.00

Other Departmental/Program Course Requirements (86-90 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12100 - Introduction To Agricultural Sciences Education And Communication Academic Programs Credits: 0.50
- AGR 20100 - Communicating Across Culture Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 for core) or
- CHM 11500 - General Chemistry Credits: 4.00
- CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core) or
- CHM 11600 - General Chemistry Credits: 4.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core) or
- MA 16010 - Applied Calculus I Credits: 3.00 or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)

Communication or Agriculture Communication Selective - Credit Hours: 11.00
- ASEC 28500 - Introduction To Publication Design Credits: 3.00
- ASEC 49100 - Special Topics In Agricultural Science And Education Communication Credits: 1.00 to 3.00 - Titles: AG Publication Design; AGCM Internship; Interactive WEB Strat for AG; Multimedia in AG Comm
- COM 10000:59999
  Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- ECON 21000 - Principles Of Economics Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00

Communication or Agriculture Communication Selective (30000+ level) - Credit Hours: 3.00
- ASEC 30000:59999
- COM 30000:59999
- Agricultural Selective - Credit Hours: 15.00
- Agricultural Selective (30000+ level) - Credit Hours: 6.00
- Biological Science Selective - Credit Hours: 4.00
- Biological Science Selective - Credit Hours: 4.00
- Mathematics or Science Selective - Credit Hours: 3.00-5.00 (4 or 5 credits may be needed if a 1 or 2 credit STS is taken)
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Science, Technology and Society - Credit Hours: 1.00-3.00 (satisfies Science, Technology, & Society for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (6-10 credits)
- Electives - Credit Hours: 6.00-10.00

Supplemental List

Click here for Agricultural Communication Supplemental Information

College of Agriculture & University Level Requirements
• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:
• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12100 - Introduction To Agricultural Sciences Education And Communication Academic Programs Credits: 0.50
• ASEC 15200 - Agricultural Communication Seminar Credits: 3.00
• Biological Science Selective - Credit Hours: 4.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 or
• MA 16010 - Applied Calculus I Credits: 3.00 or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• Agricultural Selective - Credit Hours: 3.00
• Economics Selective - Credit Hours: 3.00
• Biological Science Selective - Credit Hours: 4.00
• Oral Communication Selective - Credit Hours: 3.00

16-17 Credits

Fall 2nd Year

• AGR 20100 - Communicating Across Culture Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 or
• CHM 11500 - General Chemistry Credits: 4.00
• COM 20400 - Critical Perspectives On Communication Credits: 3.00
- Agricultural Selective - Credit Hours: 3.00
- Science, Technology, & Society Selective - Credit Hours: 1.00-3.00

14-16 Credits

Spring 2nd Year

- ASEC 28000 - Digital Storytelling Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00
- COM 31800 - Principles Of Persuasion Credits: 3.00
- Communication or Agricultural Communication Selective - Credit Hours: 3.00
- Mathematics or Science Selective - Credit Hours: 3.00-5.00

16-18 Credits

Fall 3rd Year

- COM 25200 - Writing For Mass Media Credits: 3.00 ♦
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Agricultural Selective - Credit Hours: 6.00
- Communication or Agricultural Communication Selective - Credit Hours: 2.00

14 Credits

Spring 3rd Year

- ASEC 38000 - Feature Writing And Production Credits: 3.00
- Agricultural Selective (30000+ Level) - Credit Hours: 3.00
- Communication or Agricultural Communication Selective - Credit Hours: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Elective - Credit Hours: 1.00-3.00

13-15 Credits

Fall 4th Year

- COM 31100 - Copy Editing Credits: 3.00 ♦
- ASEC 48000 - Agricultural Communication Capstone Seminar Credits: 3.00
- Agricultural Selective - Credit Hours: 3.00
- Communication or Agriculture Communication Selective (30000+ level) - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

15 Credits
Spring 4th Year

- Communication or Agricultural Communication Selective - Credit Hours: 3.00
- Agricultural Selective (30000+ level) - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Electives - Credit Hours: 5.00-7.00

14-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Agricultural Education, BS

About the Program
Agricultural education students combine their interest in agriculture with their desire to make a difference in the lives of young people. Students are prepared to teach agricultural science, business, and related subjects in middle school, high school, or college settings. They also can pursue careers in agricultural businesses and organizations. There is a high demand for agricultural education teachers in Indiana and across the United States.

This program meets state and national licensure standards and is accredited by the Council for the Accreditation of Educator Preparation (CAEP) and the State of Indiana, State Board of Education. See Teacher Licensure Information in the plan below.

Agricultural Education Website

Agricultural Education Major Change (CODO) Requirements

Degree Requirements

128 Credits Required

Departmental/Program Major Courses (49 credits)

Required Major Courses (12 credits)

- ASEC 24000 - Seminar In Agricultural Education Credits: 1.00
- ASEC 31800 - Coordination Of Supervised Agricultural Experience Programs Credits: 2.00
- ASEC 31900 - Planning Agricultural Science And Business Programs Credits: 2.00
- ASEC 34000 - Laboratory Practices In Agricultural Education Credits: 2.00
- ASEC 34100 - Curriculum Development In Agricultural Education Credits: 2.00
- ASEC 44000 - Methods Of Teaching Agricultural Education Credits: 3.00 (satisfies COA Written or Oral Communication 20000+)

Professional Education Requirements (37 credits)

All required Professional Education, and Learner Specialty Pathway courses are calculated into the 2.5 Overall Teacher Education GPA requirement with no grade lower than a "C".

Professional Education Courses (22 credits)

- EDCI 20002 - Special Populations Seminar: English Language Learners And Students With Gifts And Talents Credits: 1.00
- EDCI 20500 - Exploring Teaching As A Career Credits: 2.00 to 3.00 - Credit Hours: 2.00
- EDCI 27000 - Introduction To Educational Technology And Computing Credits: 1.00 to 3.00 - Credit Hours: 1.00 (satisfies Information Literacy for core)
- EDCI 28500 - Multiculturalism And Education Credits: 2.00 to 3.00 - Credit Hours: 2.00 (satisfies COA Multicultural Awareness)
- EDCI 30900 - Reading In Middle And Secondary Schools: Methods And Problems Credits: 1.00 to 3.00 - Credit Hours: 1.00
- EDCI 35000 - Community Issues & Applications For Educators Credits: 1.00 to 3.00 - Credit Hours: 1.00
- EDCI 37001 - Teaching And Learning English As A New Language Credits: 2.00 or 3.00 - Credit Hours: 2.00
- EDPS 20001 - Special Populations Seminar: Focus On Students With Disabilities And Differentiation Approaches Credits: 1.00
• EDPS 23500 - Learning And Motivation Credits: 2.00 or 3.00 ♦ - Credit Hours: 2.00
• EDPS 24000 - Children With Gifts, Creativity, And Talents Credits: 1.00
• EDPS 24800 - Differentiating Curriculum And Instruction Credits: 1.00
• EDPS 26501 - The Inclusive Classroom Credits: 2.00 ♦
• EDPS 32700 - Classroom Assessment Credits: 1.00 to 3.00 - Credit Hours: 1.00
• EDPS 36201 - Positive Behavioral Supports Credits: 2.00 or 3.00 - Credit Hours: 2.00
• EDPS 43010 - Secondary Creating And Managing Learning Environments Credits: 1.00 to 3.00 - Credit Hours: 2.00
• EDST 20010 - Educational Policies And Laws Credits: 1.00 to 3.00 - Credit Hours: 1.00

Professional Education Capstone Course (12 credits)

• EDCI 49800 - Supervised Teaching Credits: 8.00 to 16.00 (Capstone) - Credit Hours: 12.00 (satisfies Oral Communication for core)

Learner Specialty Pathway Selective (3 credits)

Choose one course from one of the learner specialty pathway areas below. Students can elect to take additional coursework to complete a full concentration if they choose, but is not required. See the links for concentration requirements.

If you desire additional information regarding the Learner Specialty Pathway Concentrations, please reach out to your academic advisor or visit the Learner Specialty Concentrations tab found here.

**English Language Learners**

• EDCI 31950 - Approaches To English Learner Education Credits: 3.00
• EDCI 32650 - Introduction To Linguistics And Language Acquisition In Education Credits: 3.00

**High Ability - All courses must be completed with a B- or better average.**

• EDPS 54200 - Curriculum And Program Development In Gifted Education Credits: 3.00
• EDPS 54500 - Social And Affective Development Of Gifted Students Credits: 3.00

**Special Education**

• EDCI 21100 - Special Education Law, Policy, And Ethical Guidelines Credits: 3.00

**Applied Behavior Analysis**

• EDCI 34100 - Introduction To Philosophical Underpinnings And Concepts Of Applied Behavior Analysis Credits: 3.00
• EDCI 34200 - Applied Behavior Analysis - Assessment And Intervention Credits: 3.00

**Other Departmental /Program Course Requirements (78-79 credits)**

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12100 - Introduction To Agricultural Sciences Education And Communication Academic Programs Credits: 0.50
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 (satisfies Human Culture Behavioral/Social Science for core) or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00
• AGEC 31000 - Farm Organization Credits: 3.00 ♦ or
• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• AGRY 25500 - Soil Science Credits: 3.00
• AGRY 32000 - Genetics Credits: 3.00
• AGRY 37500 - Crop Production Systems Credits: 3.00
• ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00 ♦ or
• ANSC 10600 - Biology Companion Animal Credits: 3.00 ♦
• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
• ASM 20100 - Construction And Maintenance Credits: 3.00
• ASM 35000 - Safety In Agriculture Credits: 1.00 and
• ASM 44100 - Methods Of Teaching Agricultural Mechanics Credits: 1.00 OR
ASM 1XXXX Welding Transfer Credits - Credit Hours: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core)
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, & Society for core)
• FS 16100 - Science Of Food Credits: 3.00 ♦ or
• NUTR 20500 - Food Science I Credits: 3.00 ♦
• HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
• HORT 21200 - Greenhouse And Landscape Fundamentals For Educators Credits: 3.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16010 - Applied Calculus I Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
  Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00
• ENGL 10800 - First Year Composition Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• Biological Sciences Selectives - Credit Hours: 8.00 (see Agricultural Education Supplemental Information )
• Technical Agriculture Selective - Credit Hours: 9.00 (see Agricultural Education Supplemental Information )
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• COA Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

Elective (0-1 credits)

GPA Requirements

• 2.0 Graduation GPA is required for Bachelor of Science degree.
• 2.5 Overall GPA is required for the Teacher Education Program.

Teacher Licensure Information

Successful completion of the Purdue University Agricultural Education Program, Agricultural Education, BS, and the State of Indiana licensure requirements results in an Indiana initial instructional License in Career and Technical Education (CTE): Agriculture (5-12), and Blended and Online Teaching (5-12). Contact the Office of Teacher Education and Licensure for additional information regarding Teacher Education and licensure requirements.

Office of Teacher Education and Licensure
Teacher Education Program (TEP) Requirements and Milestones

Indiana Licensure information - Each student must meet all degree, program, and licensure requirements prior to being recommended for licensure.

- 2.5 Overall GPA is required for the Teacher Education Program.
- Students must successfully progress through Milestone A to enroll in any Professional Education **Restricted Methods course.
- Successful completion of all Major, Professional Education (including all Foundations Courses with linked Foundations Portfolio Common Assessments and **Restricted Methods Courses), Learner Specialty Concentration/Pathway, and degree courses are required prior to Milestone C. Program limitations restrict additional courses to be taken simultaneously with or following student teaching without advance authorization.
- Successful completion of all Foundations Portfolio Common Assessments are required prior to Milestone D.
- Blended and online Teaching licensure requirements are embedded into coursework for all Undergraduate Licensure Programs.
- Beginning July 1, 2025 - According to the Indiana State Board of Education, students seeking an Initial Indiana License in a content area involving literacy instruction, including special education, must obtain an early literacy endorsement, Science of Reading (P-5), as required under IC 20-28-5-19.7.

Must complete 4,000 clock hours of successful employment in Agricultural Education or 1,500 clock hours of supervised work in Agricultural Education under an approved Teacher Education Program or an equivalent combination - Credit Hours: 0.00

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.
University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12100 - Introduction To Agricultural Sciences Education And Communication Academic Programs Credits: 0.50
- ASEC 24000 - Seminar In Agricultural Education Credits: 1.00
- EDCI 20500 - Exploring Teaching As A Career Credits: 2.00 to 3.00 • - Credit Hours: 2.00
- EDST 20010 - Educational Policies And Laws Credits: 1.00 to 3.00 - Credit Hours: 1.00
• HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
• Biological Science Selective - Credit Hours: 4.00
• First-Year Composition Selective - Credit Hours: 3.00 - 4.00
• Electives - Credit Hours: 0.00-1.00

15-16 Credits

Spring 1st Year

• AGEC 21700 - Economics Credits: 3.00
• ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00 ♦ or
• ANSC 10600 - Biology Companion Animal Credits: 3.00 ♦
• EDCI 28500 - Multiculturalism And Education Credits: 2.00 to 3.00 ♦ - Credit Hours: 2.00
• EDCI 35000 - Community Issues & Applications For Educators Credits: 1.00 to 3.00 - Credit Hours: 1.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 or
• MA 16010 - Applied Calculus I Credits: 3.00
• Biological Sciences Selective - Credit Hours: 4.00

16 Credits

Fall 2nd Year

• AGRY 37500 - Crop Production Systems Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦
• EDCI 20002 - Special Populations Seminar: English Language Learners And Students With Gifts And Talents Credits: 1.00
• EDPS 24000 - Children With Gifts, Creativity, And Talents Credits: 1.00
• EDPS 36201 - Positive Behavioral Supports Credits: 2.00 or 3.00 - Credit Hours: 2.00
• EDCI 37001 - Teaching And Learning English As A New Language Credits: 2.00 or 3.00 - Credit Hours: 2.00
• FNR 12500 - Environmental Science And Conservation Credits: 3.00

15 Credits

Spring 2nd Year

• ASEC 21200 - Greenhouse And Landscape Fundamentals For Educators Credits: 3.00 or
• HORT 21200 - Greenhouse And Landscape Fundamentals For Educators Credits: 3.00
• ASEC 31800 - Coordination Of Supervised Agricultural Experience Programs Credits: 2.00
• ASEC 31900 - Planning Agricultural Science And Business Programs Credits: 2.00
• CHM 11200 - General Chemistry Credits: 3.00
• EDCI 20001 - Special Populations Seminar: Focus On Students With Disabilities And Differentiation Approaches Credits: 1.00
• EDPS 23500 - Learning And Motivation Credits: 2.00 or 3.00 ♦ - Credit Hours: 2.00
• EDPS 24800 - Differentiating Curriculum And Instruction Credits: 1.00
• EDPS 26501 - The Inclusive Classroom Credits: 2.00 ♦
16 Credits

Fall 3rd Year

- AGRY 25500 - Soil Science Credits: 3.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ASEC 34000 - Laboratory Practices In Agricultural Education Credits: 2.00
- ASM 20100 - Construction And Maintenance Credits: 3.00
- EDCI 30900 - Reading In Middle And Secondary Schools: Methods And Problems Credits: 1.00 to 3.00 - Credit Hours: 1.00
- EDPS 32700 - Classroom Assessment Credits: 1.00 to 3.00 - Credit Hours: 1.00
- EDPS 43010 - Secondary Creating And Managing Learning Environments Credits: 1.00 to 3.00 - Credit Hours: 2.00
- Technical Agriculture Selective - Credit Hours: 3.00

18 Credits

Spring 3rd Year

- AGRY 32000 - Genetics Credits: 3.00
- ASEC 34100 - Curriculum Development In Agricultural Education Credits: 2.00
- ASM 35000 - Safety In Agriculture Credits: 1.00 and
- ASM 44100 - Methods Of Teaching Agricultural Mechanics Credits: 1.00 OR
  ASM IXXXX Welding Transfer Credits - Credit Hours: 3.00
- EDCI 27000 - Introduction To Educational Technology And Computing Credits: 1.00 to 3.00 - Credit Hours: 1.00
- AGEC 31000 - Farm Organization Credits: 3.00♦ or
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00♦
- Technical Agriculture Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

18 Credits

Fall 4th Year

- ASEC 44000 - Methods Of Teaching Agricultural Education Credits: 3.00 - Credit Hours: 1.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- FS 16100 - Science Of Food Credits: 3.00♦ or
- NUTR 20500 - Food Science I Credits: 3.00♦
- Learner Pathway Selective - Credit Hours: 3.00
- Technical Agriculture Selective - Credit Hours: 3.00
- Human Cultures: Humanities Selective - Credit Hours 3.00

18 Credits

Spring 4th Year
• **EDCI 49800 - Supervised Teaching Credits:** 8.00 to 16.00 (Capstone) - Credit Hours: 12.00

12 Credits

**Pre-Requisite Information**

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

**World Language Courses**

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

**Critical Course**

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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**Non-Degree**

**Agricultural Communication Supplemental Information**

Agricultural Selective (15 credits)

- ABE 10000:59999
- AGEC 10000:59999
- AGR 10000:59999
- AGRY 10000:59999
- ANSC 10000:59999
- ASEC 10000:59999
Agricultural Selective 30000+ Level (6 credits)

- ABE 30000:59999
- AGEC 30000:59999
- AGR 30000:59999
- AGRY 30000:59999
- ANSC 30000:59999
- ASEC 30000:59999
- ASM 30000:59999
- BCHM 30000:59999
- BTNY 30000:59999
- ENTM 30000:59999
- FNR 30000:59999
- FS 30000:59999
- HORT 30000:59999
- LA 30000:59999
- NRES 30000:59999
- SFS 30000:59999

College of Agriculture: Biological Science Selective (8 credits)

To fulfill the biological sciences core requirement, all students must complete at least two hours of laboratory credit in biological sciences each week for 32 weeks, or equivalent. Completion of course sequences is recommended. Courses with an (*) have a laboratory component.

- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 *
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 *
- BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
- BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
- BIOL 13500 - First Year Biology Laboratory Credits: 2.00 *
- BIOL 20300 - Human Anatomy And Physiology Credits: 4.00 *
- BIOL 20400 - Human Anatomy And Physiology Credits: 4.00 *
- BIOL 22100 - Introduction To Microbiology Credits: 4.00 *
- BIOL 23000 - Biology Of The Living Cell Credits: 3.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00 *
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00 *
• BIOL 29500 - Special Assignments Credits: 0.00 to 18.00 (Title: Quantitative Biology of the Living Cell)
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 *
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• HORT 30100 - Plant Physiology Credits: 4.00 *

College of Agriculture: Additional Mathematics or Science Selectives

• AGR 33300 - Data Science For Agriculture Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• AGEC 45100 - Applied Econometrics Credits: 3.00
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00
• AGRY 25500 - Soil Science Credits: 3.00
• AGRY 27000 - Forest Soils Credits: 3.00
• AGRY 32000 - Genetics Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00
• AGRY 33500 - Weather And Climate Credits: 3.00
• AGRY 36500 - Soil Fertility Credits: 3.00
• AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
• AGRY 46500 - Soil Physical Properties Credits: 3.00
• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
• ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
• BCHM 10000 - Introduction To Biochemistry Credits: 2.00
• BCHM 30700 - Biochemistry Credits: 3.00
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
• BTNY 11000 - Introduction To Plant Science Credits: 4.00
• BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
• BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
• CHM 22400 - Introductory Quantitative Analysis Credits: 4.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• CHM 25700 - Organic Chemistry I Credits: 3.00
• CHM 26100 - Organic Chemistry I Credits: 3.00
• CHM 26200 - Organic Chemistry II Credits: 3.00
• CHM 26300 - Organic Chemistry Laboratory I Credits: 1.00
• CHM 26400 - Organic Chemistry Laboratory II Credits: 1.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- CS 18000 - Problem Solving And Object-Oriented Programming Credits: 4.00
- EAPS 11100 - Physical Geology Credits: 3.00
- EAPS 11200 - Earth Through Time Credits: 3.00
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00
- EAPS 22100 - Survey Of Atmospheric Science Credits: 3.00
- ENTM 10200 - The Practice Of Science Credits: 2.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
- ENTM 24200 - Data Science Credits: 3.00
- ENTM 25300 - Insect Physiology And Biochemistry Credits: 4.00
- ENTM 30100 - Experimentation And Analysis Credits: 3.00
- ENTM 31200 - Plant-Insect Chemical Ecology Credits: 3.00
- ENTM 32810 - Practical Molecular Biology Credits: 3.00
- ENTM 35300 - Insecticides And Environment Credits: 3.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- FNR 20100 - Marine Biology Credits: 3.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 24000 - Wildlife In America Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- HONR 49900 - Honors Research Project Credits: 1.00 to 6.00 (Title: Human Diseases and Disorders)
- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00
- MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- MA 26100 - Multivariate Calculus Credits: 4.00
- MA 26500 - Linear Algebra Credits: 3.00
- NRES 12500 - Environmental Science And Conservation Credits: 3.00
- NRES 23000 - Survey Of Meteorology Credits: 3.00
- NRES 25500 - Soil Science Credits: 3.00
- PHYS 17200 - Modern Mechanics Credits: 4.00
- PHYS 21400 - The Nature Of Physics Credits: 3.00
- PHYS 22000 - General Physics Credits: 4.00
- PHYS 22100 - General Physics Credits: 4.00
- PHYS 23300 - Physics For Life Sciences I Credits: 4.00
- PHYS 23400 - Physics For Life Sciences II Credits: 4.00
- PHYS 24100 - Electricity And Optics Credits: 3.00
- STAT 22500 - Introduction To Probability Models Credits: 3.00
- STAT 50200 - Experimental Statistics II Credits: 3.00
Agricultural Education Supplemental Information

College of Agriculture: Biological Science Selective (8 credits)

To fulfill the biological sciences core requirement, all students must complete at least two hours of laboratory credit in biological sciences each week for 32 weeks, or equivalent. Completion of course sequences is recommended. Courses with an (*) have a laboratory component.

• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 *
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 *
• BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
• BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
• BIOL 13500 - First Year Biology Laboratory Credits: 2.00 *
• BIOL 20300 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 20400 - Human Anatomy And Physiology Credits: 4.00 *
• BIOL 22100 - Introduction To Microbiology Credits: 4.00 *
• BIOL 23000 - Biology Of The Living Cell Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00 *
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00 *
• BIOL 29500 - Special Assignments Credits: 0.00 to 18.00 (Title: Quantitative Biology of the Living Cell)
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 *
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• HORT 30100 - Plant Physiology Credits: 4.00 *

Technical Agriculture Selective (15 credits)

• AGEC 10000:59999
• AGRY 10000:59999
• ANSC 10000:59999
• ASM 10000:59999
• BTNY 10000:59999
• ENTM 10000:59999
• FNR 10000:59999
• FS 10000:59999
• HORT 10000:59999
• LA 10000:59999
• NRES 10000:59999
• SFS 10000:59999
Department of Agronomy

Overview

The Department of Agronomy at Purdue University provides global leadership in plant genetics, plant physiology, soil and water sciences, and meteorology to enhance the quality of life through agronomic education that results from discovery, education, and engagement.

Agronomy is the core of all agricultural sciences. The management of soil and water, with a view to achieving production of high yielding varieties is exclusively an agronomic domain. Among all the variances in agriculture, agronomy occupies a pivotal position. Similar to agriculture, agronomy is an integrated and applied aspect of different disciplines of pure sciences.

Our Mission & Vision

Faculty (website)

Department of Agronomy (website)

Contact Information

Department of Agronomy

Purdue University

Lilly Hall of Life Sciences
915 Mitch Daniels Blvd
West Lafayette, IN 47907-2054
Phone: 765-494-4773

Email: agronomy@purdue.edu

The Undergraduate Advising office is located in LILY 3440.

Graduate Studies

Department of Agronomy - Graduate Program Information

Bachelor of Science
Agronomy: Agronomic Business and Marketing Concentration, BS

About the Program

Agronomic Business and Marketing prepares students to meet the high demand for professionals in technical sales and marketing or professional field agronomy with strength in business. Students have the flexibility to tailor plans of study to meet their individualized interests and needs by combining strengths in business, marketing, and agronomy. The unique advantage of this option is the primary strength generated in cropping system management amplified by strength in agri-business management.

Agronomy Website

Agronomy Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (62-63 credits)

Required Major Courses (11 credits)

- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- AGRY 49800 - Agronomy Senior Seminar Credits: 1.00 (Capstone)

Agronomic Business and Marketing Concentration (51-52 credits)

Required Concentration Courses (30-31 credits)

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30400 - Introductory Weed Science Credits: 3.00
- ENGL 42000 - Business Writing Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- MGMT 21200 - Business Accounting Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, & Society for core) or
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00 (satisfies Science, Technology, & Society for core)
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00 or
- MGMT 32300 - Principles Of Marketing Credits: 3.00
  Agricultural Economics Selective - Credit Hours: 6.00-7.00
- AGEC 31000 - Farm Organization Credits: 3.00
• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 41100 - Farm Management Credits: 4.00

Concentration Selective Courses (21 credits)

• AGEC/CSR/HORT/OLS Selective - Credit Hours: 6.00
  o Agricultural Economics (AGEC 21800:59999)
  o Consumer Science and Retailing (CSR 20000:59999)
  o Horticulture (HORT 10100:59999)
  o OLS (OLS 20000:49999)
• Agronomy Selective (AGRY 10500:59999) - Credit Hours: 3.00
• Agronomy Crops Selective - Credit Hours: 3.00
• Ecology or Plant Ecology Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

Other Departmental/Program Course Requirements (48-52 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 and
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
  OR
  BIOL 11000 - Fundamentals Of Biology I and
  BIOL 11000 - Introduction To Plant Science Credits: 4.00
  OR
• BTNY 11000 - Principles Of Plant Biology I Credits: 4.00 and
• BTNY 12000 - Principles Of Plant Biology II Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core) or
• CHM 11500 - General Chemistry Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core) or
• CHM 11600 - General Chemistry Credits: 4.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core)
  or
• MA 16010 - Applied Calculus I Credits: 3.00 or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• Additional Mathematics or Science Selective - Credit Hours: 8.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (5-10 credits)
• Electives - Credit Hours: 5.00-10.00

Supplemental Information

Click here for Agronomy Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 or
- CHM 11500 - General Chemistry Credits: 4.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 or
- MA 16010 - Applied Calculus I Credits: 3.00 or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- Agronomy Crops Selective - Credit Hours: 3.00

14-16 Credits

Spring 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00 or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00

- Agronomy Selective (AGRY 10500:59999) - Credit Hours: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

16-18 Credits

Fall 2nd Year

- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- CHM 25700 - Organic Chemistry Credits: 4.00
- Oral Communication Selective - Credit Hours: 3.00
- Elective - Credit Hours: 2.00-3.00

16-17 Credits

Spring 2nd Year

- AGRY 36500 - Soil Fertility Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- Agricultural Economics Selective - Credit Hours: 3.00-4.00
- Ecology Selective - Credit Hours: 3.00

15-16 Credits

Fall 3rd Year

- BTNY 30400 - Introductory Weed Science Credits: 3.00
- MGMT 21200 - Business Accounting Credits: 3.00
- Additional Math or Science Selectives - Credit Hours: 4.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 2.00-3.00

14-15 Credits

Spring 3rd Year

- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- Additional Math or Science Selectives - Credit Hours: 4.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

16 Credits

Fall 4th Year

- AGRY 49800 - Agronomy Senior Seminar Credits: 1.00
- Agricultural Economics Selective - Credit Hours: 3.00
- Human Cultures Humanities Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

13 Credits

Spring 4th Year

- ENGL 42000 - Business Writing Credits: 3.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00 or
- MGMT 32300 - Principles Of Marketing Credits: 3.00
- Agricultural Economics, Consumer Science and Retailing, Horticulture, or OLS Selective - Credit Hours: 6.00
- Electives - Credit Hours: 1.00-4.00

13-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be
proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Agronomy: Crop and Soil Management Concentration, BS**

**About the Program**

_Crop and Soil Management_ is for students interested in applying basic agronomic information to practical situations or problems. This is an ideal option for students who plan to become a professional crops/soils manager as an agronomist, farm manager, soil conservationist, or a related profession. Those interested in crop management frequently select cropping systems, crop physiology, plant breeding, and forage management courses.

Agronomy Website

Agronomy Major Change (CODO) Requirements

**Degree Requirements**

**120 Credits Required**

**Departmental/Program Major Courses (59 credits)**

**Required Major Courses (11 credits)**

- AGRY 25500 - Soil Science _Credits: 3.00_
- AGRY 32000 - Genetics _Credits: 3.00_
- AGRY 36500 - Soil Fertility _Credits: 3.00_
- AGRY 39800 - Agronomy Seminar _Credits: 1.00_
- AGRY 49800 - Agronomy Senior Seminar _Credits: 1.00 (Capstone)_

**Crop and Soil Management Concentration (48 credits)**

**Required Concentration Courses (6 credits)**

- AGRY 10500 - Crop Production _Credits: 3.00_
- AGRY 12500 - Environmental Science And Conservation _Credits: 3.00 or
• AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00

Concentration Selective Courses (15 credits)

Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Agronomy Selective (AGRY 10500:59999) - Credit Hours: 3.00
• Ecology or Plant Ecology Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

Directed Selective (27 credits)

• AGEC 10500:59999 and/or ECON 20000:59999
• AGRY 10500:59999
• MGMT 20000:59999
• ASM 54000 - Geographic Information System Application Credits: 3.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00
• COM 20400 - Critical Perspectives On Communication Credits: 3.00
• COM 25200 - Writing For Mass Media Credits: 3.00
• COM 25600 - Introduction To Advertising Credits: 3.00
• COM 45600 - Advertising Writing Credits: 3.00
• COM 49500 - Special Topics In Public Relations And Rhetorical Advocacy Credits: 3.00
• EAPS 11100 - Physical Geology Credits: 3.00
• ENGL 30400 - Advanced Composition Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00
• FNR 35900 - Spatial Ecology And GIS Credits: 3.00
• ASEC 28500 - Introduction To Publication Design Credits: 3.00
• ASEC 48500 - Environmental Communication Credits: 3.00
• FNR 21000 - Natural Resource Information Management Credits: 3.00
• HORT 20100 - Plant Propagation Credits: 3.00
• HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
• HORT 21100 - Fundamentals Of Turfgrass Culture Laboratory Credits: 1.00
• HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
• HORT 31900 - Controlled Environment Production Of Horticultural Crops Credits: 3.00

Other Departmental/Program Course Requirements (48-52 credits)
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50

Biology Requirement - Credit Hours: 8.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 and
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
OR
• BIOL 11000 - Fundamentals Of Biology I and
• BIOL 11100 - Fundamentals Of Biology II

• BTNY 11000 - Introduction To Plant Science Credits: 4.00
OR
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00

• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core) or
• CHM 11500 - General Chemistry Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core) or
• CHM 11600 - General Chemistry Credits: 4.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16010 - Applied Calculus I Credits: 3.00
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00

Additional Mathematics or Science Selectives - Credit Hours: 8.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (9-13 credits)
• Electives - Credit Hours: 9.00-13.00

Supplemental Information

Click here for Agronomy Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement
• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
• AGRY 10500 - Crop Production Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 or
• CHM 11500 - General Chemistry Credits: 4.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 or
• MA 16010 - Applied Calculus I Credits: 3.00 or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00

14-16 Credits

Spring 1st Year

• CHM 11200 - General Chemistry Credits: 3.00 or
• CHM 11600 - General Chemistry Credits: 4.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 or
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• Economics Selective - Credit Hours: 3.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00
• Electives - Credit Hours: 2.00-3.00

15-18 Credits

Fall 2nd Year

• AGRY 25500 - Soil Science Credits: 3.00
• AGRY 39800 - Agronomy Seminar Credits: 1.00
- CHM 25700 - Organic Chemistry Credits: 4.00
- Directed Selective - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00

14 Credits

Spring 2nd Year

- AGRY 36500 - Soil Fertility Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 or
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- Ecology or Plant Ecology Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Fall 3rd Year

- Directed Selectives - Credit Hours: 6.00
- Math or Science Selectives - Credit Hours: 4.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

16 Credits

Spring 3rd Year

- AGRY 32000 - Genetics Credits: 3.00
- Agronomy Selective - Credit Hours: 3.00
- Directed Selective - Credit Hours: 3.00
- Math or Science Selectives - Credit Hours: 4.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

16 Credits

Fall 4th Year

- AGRY 49800 - Agronomy Senior Seminar Credits: 1.00
- Directed Selectives - Credit Hours: 6.00
- Human Cultures: Humanities Selective (satisfies Human Cultures: Humanities for core) - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 1.00-2.00

14-15 Credits
Spring 4th Year

- Directed Selectives - Credit Hours: 9.00
- Electives - Credit Hours: 3.00-5.00

12-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Agronomy: International Agronomy Concentration, BS

About the Program

International Agronomy is designed for students interested in the agronomic aspects of international agricultural development. The program prepares students for opportunities in world agriculture through careers with social action agencies, government and/or private industry. Students in this major build a strong foundation in science to go along with their study of international trade, culture, religion, language, food security, and agricultural development.

Agronomy Website
Agronomy Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (62 credits)

Required Major Courses (11 credits)

- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- AGRY 49800 - Agronomy Senior Seminar Credits: 1.00 (Capstone)

International Agronomy Concentration (51 credits)

Required Concentration Courses (19 credits)

- AGEC 34000 - International Economic Development Credits: 3.00
- AGEC 45000 - International Agricultural Trade Credits: 3.00
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00 (satisfies Science, Technology, & Society for core)
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 35000 - Global Awareness Credits: 1.00 to 3.00 - Credit Hours: 1.00
- AGRY 56500 - Soils And Landscapes Credits: 3.00
- AGRY 59800 - Special Problems Credits: 1.00 to 6.00 - Credit Hours: 3.00

Concentration Selective Courses (32 credits)

- International Agronomy Concentration Directed Selective - Credit Hours: 6.00
- ENTM 20600 - General Entomology Credits: 2.00 and
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
  OR
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
  OR
- BTNY 30400 - Introductory Weed Science Credits: 3.00
  Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
  Macroeconomics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
- AGEC 21700 - Economics Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00
- Agriculture or Science Selectives - Credit Hours: 6.00
• Conversation Language Selective - Credit Hours: 2.00
• Ecology or Plant Ecology Selective - Credit Hours: 3.00
• Foreign Language Selective - Credit Hours: 9.00

Other Departmental/Program Course Requirements (48-52 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
  Biology Requirement - Credit Hours: 8.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 and
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
  OR
• BTNY 11000 - Introduction To Plant Science Credits: 4.00
  OR
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 and
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core) or
• CHM 11500 - General Chemistry Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core) or
• CHM 11600 - General Chemistry Credits: 4.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• Additional Mathematics or Science Selectives - Credit Hours: 8.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (6-10 credits)

• Electives - Credit Hours: 6.00-10.00

Supplemental Information

Supplemental List for Agronomy Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

**College of Agriculture Pass/No Pass Policy**

**College of Agriculture Undergraduate Pass/No Pass Policy**

**Transfer Credit Policy**

Transfer courses listed in the [Purdue Transfer Equivalency Guide](#) with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

**GPA Requirements**

- 2.0 GPA required for Bachelor of Science degree.

**University Requirements**

**University Core Requirements**

For a complete listing of University Core Course Selectives, visit the [Provost's Website](#).  

- Human Cultures: Behavioral/Social Science (BSS)  
- Human Cultures: Humanities (HUM)  
- Information Literacy (IL)  
- Oral Communication (OC)  
- Quantitative Reasoning (QR)  
- Science #1 (SCI)  
- Science #2 (SCI)  
- Science, Technology, and Society (STS)  
- Written Communication (WC)

**Civics Literacy Proficiency Requirement**

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.  

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 or
• CHM 11500 - General Chemistry Credits: 4.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 or
• MA 16010 - Applied Calculus I Credits: 3.00 or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• Oral Communication Selective - Credit Hours: 3.00

14-16 Credits

Spring 1st Year

• AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
• CHM 11200 - General Chemistry Credits: 3.00 or
• CHM 11600 - General Chemistry Credits: 4.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 or
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• Microeconomics Selective - Credit Hours: 3.00
• AGECE 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGECE 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

16-18 Credits
Fall 2nd Year

- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- CHM 25700 - Organic Chemistry Credits: 4.00
- Macroeconomics Selective - Credit Hours: 3.00
- AGER 21700 - Economics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- Foreign Language Selective - Credit Hours: 3.00

14 Credits

Spring 2nd Year

- AGRY 36500 - Soil Fertility Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Ecology or Plant Ecology Selective - Credit Hours: 3.00
- Additional Mathematics or Science Selective - Credit Hours: 4.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

16 Credits

Fall 3rd Year

- AGEC 45000 - International Agricultural Trade Credits: 3.00
- International Agronomy Concentration Directed Selective - Credit Hours: 3.00
- Foreign Language Selective - Credit Hours: 3.00
- Additional Mathematics or Science Selectives - Credit Hours: 4.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00

16 Credits

Spring 3rd Year

- AGEC 34000 - International Economic Development Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 35000 - Global Awareness Credits: 1.00 to 3.00
- Conversation Language Selective - Credit Hours: 2.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

15 Credits

Fall 4th Year
• AGRY 49800 - Agronomy Senior Seminar Credits: 1.00
• AGRY 56500 - Soils And Landscapes Credits: 3.00
• AGRY 59800 - Special Problems Credits: 1.00 to 6.00 - Credit Hours: 3.00
• Foreign Language Selective - Credit Hours: 3.00
• Elective - Credit Hours: 2.00-3.00

12-13 Credits

Spring 4th Year

• International Agronomy Concentration Directed Selective - Credit Hours: 3.00
• Agriculture or Science Selective - Credit Hours: 6.00
• Electives - Credit Hours: 4.00-7.00

13-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.
Applied Meteorology and Climatology, BS

About the Program

Many graduates pursue careers with the National Weather Service, the National Environmental Satellite Data and Information Service, the Environmental Research Laboratories, and the Department of Defense. Graduates also pursue careers with private meteorological or environmental consulting firms that provide weather information and apply atmospheric sciences to air pollution control, energy distribution, marketing, transportation, weather modification, and agriculture. Graduates also work for insurance and commodities industries that employ meteorologists who are educated in statistics, agriculture, and world climates.

Applied meteorologists apply weather and climate information to problems facing agriculture and commerce. Students acquire the skills and tools necessary to improve the health, safety, and productivity of today's world. Graduates work on many environmental problems such as air quality, renewable energy sources, climate change and the impacts of climate change.

The option involves extensive coursework in meteorology, physics, and mathematics, as well as first-hand experience in applying basic concepts to real world situations. Internship programs are available with private industry, the National Weather Service, or the National Oceanic and Atmospheric Administration. In addition there are regular opportunities to work in University laboratories and the State Climate Office.

Agronomy Website

Applied Meteorology and Climatology Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (32 credits)

Required Major Courses (32 credits)

- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00 (satisfies Science, Technology, & Society for core)
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 33700 - Environmental Hydrology Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- AGRY 43100 - Atmospheric Thermodynamics Credits: 3.00
- AGRY 43200 - Atmospheric Dynamics I Credits: 3.00
- AGRY 43300 - Atmospheric Dynamics II Credits: 3.00
- AGRY 44100 - Synoptic Laboratory I Credits: 1.00
- AGRY 44200 - Synoptic Laboratory II Credits: 1.00
- AGRY 44300 - Synoptic Laboratory III Credits: 1.00
- AGRY 49800 - Agronomy Senior Seminar Credits: 1.00 (Capstone)
- AGRY 53500 - Boundary Layer Meteorology Credits: 3.00
- AGRY 53600 - Environmental Biophysics Credits: 3.00
- AGRY 54500 - Remote Sensing Of Land Resources Credits: 3.00
Other Departmental /Program Course Requirements (77-80 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University
  Credits: 0.50
- AGR 11300 - Introduction To Agronomy Academic Programs
  Credits: 0.50
- CHM 11100 - General Chemistry
  Credits: 3.00 (satisfies Science #1 for core)
- CHM 11200 - General Chemistry
  Credits: 3.00 (satisfies Science #2 for core)
- CS 17700 - Programming With Multimedia Objects
  Credits: 4.00
- EAPS 22700 - Introduction To Atmospheric Observation And Measurements
  Credits: 3.00
- EAPS 43400 - Weather Analysis And Forecasting
  Credits: 3.00
- EAPS 53200 - Atmospheric Physics I
  Credits: 3.00
- MA 16100 - Plane Analytic Geometry And Calculus I
  Credits: 5.00 (satisfies Quantitative Reasoning for core) or
- MA 16500 - Analytic Geometry And Calculus I
  Credits: 4.00
- MA 16200 - Plane Analytic Geometry And Calculus II
  Credits: 5.00 or
- MA 16600 - Analytic Geometry And Calculus II
  Credits: 4.00
- MA 26100 - Multivariate Calculus
  Credits: 4.00
- MA 26200 - Linear Algebra And Differential Equations
  Credits: 4.00
- PHYS 17200 - Modern Mechanics
  Credits: 4.00
- PHYS 24100 - Electricity And Optics
  Credits: 3.00
- STAT 30100 - Elementary Statistical Methods
  Credits: 3.00 (satisfies Information Literacy for core)
- BIOL 11000 - Fundamentals Of Biology I
  Credits: 4.00 and
- BIOL 11100 - Fundamentals Of Biology II
  Credits: 4.00 OR
- BIOL 11000 - Fundamentals Of Biology I and
- BTNY 11000 - Introduction To Plant Science
  Credits: 4.00 OR
- BTNY 12000 - Principles Of Plant Biology I
  Credits: 4.00 and
- BTNY 12100 - Principles Of Plant Biology II
  Credits: 4.00
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness
  Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy
  Credits: 3.00 or
- AGEC 21700 - Economics
  Credits: 3.00 or
- ECON 21000 - Principles Of Economics
  Credits: 3.00 or
- ECON 25100 - Microeconomics
  Credits: 3.00 or
- ECON 25200 - Macroeconomics
  Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (8-11 credits)

- Electives - Credit Hours: 8.00-11.00

College of Agriculture & University Level Requirements
• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:
• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
• CHM 11100 - General Chemistry Credits: 3.00 ♦
• MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00 or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• Oral Communication Selective - Credit Hours: 3.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00

15-16 Credits

Spring 1st Year

• MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00 or
• MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 or
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• Written Communication Selective - Credit Hours: 3.00-4.00

14-16 Credits

Fall 2nd Year

• AGRY 39800 - Agronomy Seminar Credits: 1.00
• CS 17700 - Programming With Multimedia Objects Credits: 4.00
• EAPS 22700 - Introduction To Atmospheric Observation And Measurements Credits: 3.00
• MA 26100 - Multivariate Calculus Credits: 4.00
• PHYS 17200 - Modern Mechanics Credits: 4.00

15 Credits

Spring 2nd Year

• AGRY 33500 - Weather And Climate Credits: 3.00
• AGRY 44100 - Synoptic Laboratory I Credits: 1.00
• MA 26200 - Linear Algebra And Differential Equations Credits: 4.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• PHYS 24100 - Electricity And Optics Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
  Economics Selective - Credit Hours: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00

17 Credits

Fall 3rd Year

• AGRY 43100 - Atmospheric Thermodynamics Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
• AGRY 43200 - Atmospheric Dynamics I Credits: 3.00
• AGRY 44200 - Synoptic Laboratory II Credits: 1.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Electives - Credit Hours: 3.00-4.00

13-14 Credits

Fall 4th Year
• AGRY 43300 - Atmospheric Dynamics II Credits: 3.00
• AGRY 44300 - Synoptic Laboratory III Credits: 1.00
• AGRY 49800 - Agronomy Senior Seminar Credits: 1.00
• AGRY 53500 - Boundary Layer Meteorology Credits: 3.00
• AGRY 54500 - Remote Sensing Of Land Resources Credits: 3.00
• Elective - Credit Hours: 2.00-3.00

13-14 Credits

Spring 4th Year

• AGRY 33700 - Environmental Hydrology Credits: 3.00
• AGRY 53600 - Environmental Biophysics Credits: 3.00
• EAPS 43400 - Weather Analysis And Forecasting Credits: 3.00
• EAPS 53200 - Atmospheric Physics I Credits: 3.00
• Elective - Credit Hours: 3.00-4.00

15-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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**Crop Science, BS**

**About the Program**

Crop science provides an education in the basic sciences, with applications in crop plant management and crop improvement. Opportunities are numerous and encompass a broad range in science, business, and education. Students are especially qualified for graduate study in plant nutrition, environmental science, crop physiology and ecology, biotechnology and plant genetics, and plant breeding.

Agronomy Website

Crop Science Major Change (CODO) Requirements

**Degree Requirements**

**120 Credits Required**

**Departmental/Program Major Courses (33-34 credits)**

**Required Major Courses (27-28 credits)**

- AGRY 10500 - Crop Production Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- AGRY 49800 - Agronomy Senior Seminar Credits: 1.00 (Capstone)
- AGRY 51500 - Plant Mineral Nutrition Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, & Society for core) or
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00 (satisfies Science, Technology, & Society for core)
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00 or
- HORT 30100 - Plant Physiology Credits: 4.00

**Agronomy Selectives (6 credits)**

- AGRY 10000:59999 - Credit Hours: 6.00

**Other Departmental/Program Course Requirements (77-81 credits)**
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
• BCHM 30700 - Biochemistry Credits: 3.00
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core) or
• CHM 11500 - General Chemistry Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core) or
• CHM 11600 - General Chemistry Credits: 4.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• MA 16020 - Applied Calculus II Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• PHYS 22100 - General Physics Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 and
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
OR
• BIOL 11000 - Fundamentals Of Biology I and
• BTNY 11000 - Introduction To Plant Science Credits: 4.00
OR
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 and
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00
• Business Selective - Credit Hours: 3.00 (AGEC 10000:59999; ECON 10000:59999; MGMT 10000:59999; OLS 10000:59999)
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (5-10 credits)
• Elective - Credit Hours: 5.00-10.00

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement
The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
- AGRY 10500 - Crop Production Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00 or
- CHM 11500 - General Chemistry Credits: 4.00
- MA 16010 - Applied Calculus I Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

17-20 Credits

Spring 1st Year

- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00
- MA 16020 - Applied Calculus II Credits: 3.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00 or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
  Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Agronomy Selective (AGRY 10000:59999) - Credit Hours: 3.00

16-17 Credits

Fall 2nd Year

• AGRY 25500 - Soil Science Credits: 3.00
• AGRY 39800 - Agronomy Seminar Credits: 1.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• Oral Communication Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00-3.00

13-15 Credits

Spring 2nd Year

• AGRY 36500 - Soil Fertility Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00
• AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
• Agronomy Selective (AGRY 10000:59999) - Credit Hours: 3.00
• Elective - Credit Hours: 1.00-3.00

13-15 Credits

Fall 3rd Year

• AGRY 32000 - Genetics Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

17 Credits

Spring 3rd Year

• AGRY 33500 - Weather And Climate Credits: 3.00
• PHYS 22100 - General Physics Credits: 4.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

13 Credits

Fall 4th Year

• AGRY 49800 - Agronomy Senior Seminar Credits: 1.00
• AGRY 51500 - Plant Mineral Nutrition Credits: 3.00
• BCHM 30700 - Biochemistry Credits: 3.00
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• Elective - Credit Hours: 3.00

14 Credits

Spring 4th Year

• BTNY 30400 - Introductory Weed Science Credits: 3.00
• AGRY 52500 - Crop Physiology And Ecology Credits: 3.00 or
• HORT 30100 - Plant Physiology Credits: 4.00
• Business Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 0.00-1.00

12-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS-Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be
proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Digital Agronomy BS

About the Program

A specialty within the field of Agronomy that focuses on the integration of data into crop and soil management. Students in Digital Agronomy will develop understanding of data collection platforms, including unmanned vehicles, satellites and sensors; use their agronomic expertise to develop recommendations from data; and ultimately, how to turn recommendations into actions. Through this process, our students develop a broad, big picture view of how farmers can use digital tools to get things done.

Agronomy Website

Agronomy Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (60-62 credits)

Required Major Courses (39-41 credits)

- AGRY 10500 - Crop Production Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science Technology & Society for core)
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 37500 - Crop Production Systems Credits: 3.00 or
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- AGRY 39900 - Individual Study Credits: 1.00 to 3.00
- AGRY 42000 - Computing For The Natural Sciences Credits: 3.00
- ASM 42200 - Advanced Machine Technology For Agricultural Crop Production Credits: 3.00
• AGRY 49800 - Agronomy Senior Seminar  
  Credits: 1.00
• AGRY 48500 - Precision Crop Management  
  Credits: 3.00
• ILS 25000 - Introduction To Geographic Information Systems  
  Credits: 3.00 or
• ASM 54000 - Geographic Information System Application  
  Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing  
  Credits: 3.00 or
• AGRY 54500 - Remote Sensing Of Land Resources  
  Credits: 3.00
  Geospatial Application - Credit Hours: 3.00
• CE 50801 - Geographic Information Systems  
  Credits: 3.00 or
• EAPS 50700 - Introduction To Analysis And Computing With Geoscience Data  
  Credits: 3.00 or
• EAPS 50801 - Geographic Information Systems  
  Credits: 3.00 or
• FNR 35910 - Spatial Ecology  
  Credits: 2.00 and
• FNR 35950 - Spatial Ecology Laboratory  
  Credits: 1.00

Major Selectives (21 credits)

• Advanced Crop Science Selective - Credit Hours: 6.00
• Advanced Soil Science Selectives - Credit Hours: 6.00
• Bioinformatics and Biotechnology Selective - Credit Hours: 3.00
• Data Literacy & Analytics Selective - Credit Hours: 3.00
• Data Management Selective - Credit Hours: 3.00

Other Departmental/Program Course Requirements (53-54 credits)

• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness  
  Credits: 3.00
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University  
  Credits: 0.50
• AGR 11300 - Introduction To Agronomy Academic Programs  
  Credits: 0.50
• BIOL 11000 - Fundamentals Of Biology I  
  Credits: 4.00 or
• BTNY 12000 - Principles Of Plant Biology I  
  Credits: 4.00
• BIOL 11100 - Fundamentals Of Biology II  
  Credits: 4.00 or
• BTNY 11000 - Introduction To Plant Science  
  Credits: 4.00
• CHM 11100 - General Chemistry  
  Credits: 3.00
• CHM 11200 - General Chemistry  
  Credits: 3.00
• MA 16010 - Applied Calculus I  
  Credits: 3.00
• STAT 30100 - Elementary Statistical Methods  
  Credits: 3.00
• ILS 23000 - Data Science And Society: Ethical Legal Social Issues  
  Credits: 3.00 or
• PHIL 20800 - Ethics Of Data Science  
  Credits: 3.00
• PHYS 22000 - General Physics  
  Credits: 4.00 or
• PHYS 23300 - Physics For Life Sciences I  
  Credits: 4.00
• PHYS 22100 - General Physics  
  Credits: 4.00 or
• PHYS 23400 - Physics For Life Sciences II  
  Credits: 4.00
• Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• College of Ag: Humanities or Social Science Selective - Credit Hours: 3.00
• College of Ag: Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• College of Ag: Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
Electives (4-7 credits)

- Electives - Credit Hours: 4.00-7.00

Supplemental Lists

- Agronomy Supplemental Information

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan
A 4-year guide from a first-time freshman point of view. Understanding that each student will have a different experience, the 8-semester plan is simply for guidance for a student to understand how their degree can be completed within 4 years.

Each academic year should include at least 30 semester hours completed (30/60/90/120).

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
- AGRY 10500 - Crop Production Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00

14 Credits

Spring 1st Year

- AGRY 12500 - Environmental Science And Conservation Credits: 3.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- CHM 11200 - General Chemistry Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

16-17 Credits

Fall 2nd Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00 or
- ASM 54000 - Geographic Information System Application Credits: 3.00
- PHYS 22000 - General Physics Credits: 4.00 or
- PHYS 23300 - Physics For Life Sciences I Credits: 4.00
- Oral Communication Selective - Credit Hours: 3.00

17 Credits

Spring 2nd Year

- AGRY 36500 - Soil Fertility Credits: 3.00
- ILS 23000 - Data Science And Society: Ethical Legal Social Issues Credits: 3.00 or
- PHIL 20800 - Ethics Of Data Science Credits: 3.00
• PHYS 22100 - General Physics **Credits:** 4.00 or
• PHYS 23400 - Physics For Life Sciences II **Credits:** 4.00
• Advanced Crop Science Selective - Credit Hours: 3.00
• Data Management Selective - Credit Hours: 3.00

16 Credits

**Fall 3rd Year**

• AGRY 37500 - Crop Production Systems **Credits:** 3.00 or
• HORT 31800 - Field Production Of Horticultural Crops **Credits:** 3.00
• AGRY 39900 - Individual Study **Credits:** 1.00 to 3.00
• Bioinformatics and Biotechnology Selective - Credit Hours: 3.00
• Advanced Soil Science Selective - Credit Hours: 3.00
• College of Ag: Humanities or Social Sciences Selectives (30000+) - Credit Hours: 3.00

13-15 Credits

**Spring 3rd Year**

• AGRY 33500 - Weather And Climate **Credits:** 3.00
• CE 50801 - Geographic Information Systems **Credits:** 3.00 or
• EAPS 50700 - Introduction To Analysis And Computing With Geoscience Data **Credits:** 3.00 or
• EAPS 50801 - Geographic Information Systems **Credits:** 3.00 or
• FNR 35910 - Spatial Ecology **Credits:** 2.00 and
• FNR 35950 - Spatial Ecology Laboratory **Credits:** 1.00
• Advanced Soil Science Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• College of Ag: Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

**Fall 4th Year**

• AGRY 42000 - Computing For The Natural Sciences **Credits:** 3.00
• AGRY 48500 - Precision Crop Management **Credits:** 3.00
• AGRY 49800 - Agronomy Senior Seminar **Credits:** 1.00
• ASM 42200 - Advanced Machine Technology For Agricultural Crop Production **Credits:** 3.00
• FNR 35700 - Fundamental Remote Sensing **Credits:** 3.00 or
• AGRY 54500 - Remote Sensing Of Land Resources **Credits:** 3.00

13 Credits

**Spring 4th Year**
• Advanced Crop Science Selective - Credit Hours: 3.00
• Data Literacy & Analytics Selective - Credit Hours: 3.00
• College of Ag: Humanities or Social Sciences Selectives - Credit Hours: 3.00
• Electives - Credit Hours: 4.00-7.00

13-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana’s Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Plant Genetics, Breeding, and Biotechnology, BS

About the Program

Plant genetics, breeding, and biotechnology students are interested in agricultural biotechnology, genetic engineering, and research in genetic mechanisms that control crop growth and development. Students prepare for many research opportunities in industry and acquire the necessary background for graduate studies. Students also learn the fundamentals of genetics and practical plant breeding as well as the latest developments in genetic engineering, environmentally sound crop production practices, development of varieties appropriate for the agriculture of developing countries, and strategies for developing plant
lines adapted to environmental stresses. Opportunities exist for training both in laboratory and field practices important to modern genetics research. A professional internship involving practical aspects of the option is required.

Department of Agronomy (website)

Plant Genetics, Breeding and Biotechnology Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (21-22 credits)

Required Major Courses (21-22 credits)

- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00 (satisfies Science, Technology, & Society for core)
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- AGRY 48000 - Plant Genetics Credits: 3.00
- AGRY 49800 - Agronomy Senior Seminar Credits: 1.00 (Capstone)
- AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00 or
- HORT 30100 - Plant Physiology Credits: 4.00

Other Departmental /Program Course Requirements (89-93 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
- AGR 12500 - Introduction To Plant Science Credits: 1.00
- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- CHM 11500 - General Chemistry Credits: 4.00 ♦ (satisfies Science #1 for core)
- CHM 11600 - General Chemistry Credits: 4.00 ♦ (satisfies Science #2 for core)
- CHM 25700 - Organic Chemistry Credits: 4.00
- CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- MA 16020 - Applied Calculus II Credits: 3.00 or
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 and
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00

OR
• BIOL 11000 - Fundamentals Of Biology I and  
• BTNY 11000 - Introduction To Plant Science Credits: 4.00  
OR  
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 and  
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00  
• BIOL 22100 - Introduction To Microbiology Credits: 4.00  
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00 or  
• BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00  
• BIOL 41500 - Introduction To Molecular Biology Credits: 3.00 or  
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00  
• PHYS 17200 - Modern Mechanics Credits: 4.00 or  
• PHYS 22000 - General Physics Credits: 4.00  
• PHYS 22100 - General Physics Credits: 4.00 or  
• PHYS 24100 - Electricity And Optics Credits: 3.00  
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)  
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or  
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or  
• AGEC 21700 - Economics Credits: 3.00 or  
• ECON 21000 - Principles Of Economics Credits: 3.00 or  
• ECON 25100 - Microeconomics Credits: 3.00 or  
• ECON 25200 - Macroeconomics Credits: 3.00  
• Directed Selective - Credit Hours: 12.00  
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)  
• Humanities or Social Science Selective - Credit Hours: 3.00  
• Humanities or Social Science Selective - Credit Hours: 3.00  
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00  
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)  
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)  
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (6-9 credits)

• Elective - Credit Hours: 6.00-9.00  (Credits required depend on Math, Physics, & Physiology course choices)

Supplemental List

Click here for Plant Genetics, Plant Breeding & Biotechnology Supplemental Information

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy
Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Additional Information

- Any additional information that does not fit into any of the categories above.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
- AGR 12500 - Introduction To Plant Science Credits: 1.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
- CHM 11500 - General Chemistry Credits: 4.00
- MA 16010 - Applied Calculus I Credits: 3.00 or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00

16-18 Credits

Spring 1st Year
- CHM 11600 - General Chemistry Credits: 4.00 ♦
- MA 16020 - Applied Calculus II Credits: 3.00 or
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00 or
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
- Elective - Credit Hours: 3.00

14-15 Credits

Fall 2nd Year

- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- PHYS 17200 - Modern Mechanics Credits: 4.00 or
- PHYS 22000 - General Physics Credits: 4.00
- Directed Selective - Credit Hours: 3.00
  Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00

15 Credits

Spring 2nd Year

- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- CHM 25700 - Organic Chemistry Credits: 4.00
- CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
- PHYS 22100 - General Physics Credits: 4.00 or
- PHYS 24100 - Electricity And Optics Credits: 3.00
- Oral Communication Selective - Credit Hours: 3.00
- Elective - Credit Hours: 0.00-1.00

15-16 Credits

Fall 3rd Year

- AGRY 25500 - Soil Science Credits: 3.00 ♦
- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00 or
• BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00-2.00

14-15 Credits

Spring 3rd Year

• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• Directed Selective - Credit Hours: 6.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

16 Credits

Fall 4th Year

• AGRY 48000 - Plant Genetics Credits: 3.00
• AGRY 49800 - Agronomy Senior Seminar Credits: 1.00
• AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• BIOL 41500 - Introduction To Molecular Biology Credits: 3.00 or
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00

13 Credits

Spring 4th Year

• AGRY 52500 - Crop Physiology And Ecology Credits: 3.00 or
• HORT 30100 - Plant Physiology Credits: 4.00
• Directed Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Elective - Credit Hours: 2.00-3.00

14-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-
Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Soil and Water Sciences, BS

About the Program

The Soil and Water Sciences option provides a strong science education, while preparing students to apply this knowledge in many technical phases of soil, water resources and environmental management. Opportunities are numerous and encompass a broad range in science, management, and education with diverse applications addressing agricultural water use, food security, soil and water quality and secure water supplies. Students are especially qualified for graduate study in hydrology, water resources, soil chemistry, soil physics, soil microbiology, environmental science, soil mineralogy and genesis, and ecology.

Department of Agronomy (website)

Soil And Water Sciences Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (38-39 credits)

Required Major Courses (29-30 credits)

• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, & Society for core)
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 33700 - Environmental Hydrology Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 39800 - Agronomy Seminar Credits: 1.00
- AGRY 46500 - Soil Physical Properties Credits: 3.00
- AGRY 49800 - Agronomy Senior Seminar Credits: 1.00 (Capstone)
- AGRY 56500 - Soils And Landscapes Credits: 3.00
- AGRY 34900 - Soil Ecology Credits: 3.00 or
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 45000 - Soil Conservation and Water Management Credits: 3.00 or
- AGRY 58500 - Soils And Land Use Credits: 3.00 (Capstone)

**Major Selectives (9 credits)**

- Crop or Plant Science Selective - Credit Hours: 3.00
- Ecology Selective - Credit Hours: 3.00
- Engineering or Science Selective - Credit Hours: 3.00

Soil & Water Sciences Supplemental Information

**Other Departmental/Program Course Requirements (70-73 credits)**

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 and
  - BIOL 11000 - Fundamentals Of Biology II Credits: 4.00
  OR
  - BIOL 11000 - Fundamentals Of Biology I and
  - BTNY 11000 - Introduction To Plant Science Credits: 4.00
  OR
  - BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 and
  - BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- CHM 25700 - Organic Chemistry Credits: 4.00
- CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
- EAPS 11100 - Physical Geology Credits: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- MA 16020 - Applied Calculus II Credits: 3.00 or
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
- PHYS 22000 - General Physics Credits: 4.00 or
- PHYS 17200 - Modern Mechanics Credits: 4.00
- PHYS 22100 - General Physics Credits: 4.00
  - Genetics or Crop Physiology and Ecology, or Biochemistry Selective - Credit Hours: 3.00
- AGRY 32000 - Genetics Credits: 3.00
• AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
• BCHM 30700 - Biochemistry Credits: 3.00
  Agricultural Economics, Economics, Management or Technology Leadership & Innovation Selective - Credit Hours: 3.00
  • AGEC 10000:59999
  • ECON 10000:59999
  • MGMT 10000:59999
  • OLS 10000:59999
  • TLI 10000:59999
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
  • AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
  • AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
  • AGEC 21700 - Economics Credits: 3.00
  • ECON 21000 - Principles Of Economics Credits: 3.00
  • ECON 25100 - Microeconomics Credits: 3.00
  • ECON 25200 - Macroeconomics Credits: 3.00
  • Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
  • Humanities or Social Science Selective - Credit Hours: 3.00
  • Humanities or Social Science Selective - Credit Hours: 3.00
  • Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
  • Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
  • Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
  • Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (10-12 credits)

• Elective - Credit Hours: 8.00-12.00

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

Course Requirements and Notes

• Double-counting policy - where is it allowed and not allowed; specific notes or requirements about courses; repeatable limits, study abroad, etc.

Non-course / Non-credit Requirements

• Degree requirements which are not associated to a course. For example: portfolio, work experience, certifications. Should equal 0 credits.

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy
Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Additional Information

- Any additional information that does not fit into any of the categories above.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11300 - Introduction To Agronomy Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology Credits: 4.00 or
- BTNY 12000 - Principles Of Plant Biology Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- MA 16010 - Applied Calculus Credits: 3.00 or
- MA 16500 - Analytic Geometry And Calculus Credits: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00

14-16 Credits

Spring 1st Year

- CHM 11200 - General Chemistry Credits: 3.00 ♦
• MA 16020 - Applied Calculus II Credits: 3.00 or
• MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 or
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• Economics Selective - Credit Hours: 3.00
• Elective - Credit Hours: 2.00-3.00

15-17 Credits

Fall 2nd Year

• AGRY 25500 - Soil Science Credits: 3.00 ♦
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00
• AGRY 39800 - Agronomy Seminar Credits: 1.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• Crop or Plant Science Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

• AGRY 36500 - Soil Fertility Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• Oral Communication Selective - Credit Hours: 3.00
• Ecology Selective - Credit Hours: 3.00
• Elective - Credit Hours: 2.00

15 Credits

Fall 3rd Year

• EAPS 11100 - Physical Geology Credits: 3.00
• PHYS 22100 - General Physics Credits: 4.00
• AGRY 34900 - Soil Ecology Credits: 3.00 or
• AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
• Human Cultures: Humanities - Credit Hours: 3.00
• Elective - Credit Hours: 2.00

15-16 Credits

Spring 3rd Year

• AGRY 33700 - Environmental Hydrology Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• Genetics or Crop Physiology and Ecology, or Biochemistry Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Fall 4th Year

• AGRY 46500 - Soil Physical Properties Credits: 3.00
• AGRY 49800 - Agronomy Senior Seminar Credits: 1.00
• AGRY 56500 - Soils And Landscapes Credits: 3.00
• AGRY 45000 - Soil Conservation and Water Management Credits: 3.00 or
• AGRY 58500 - Soils And Land Use Credits: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

13 Credits

Spring 4th Year

• AGRY 33500 - Weather And Climate Credits: 3.00
• Engineering or Science Selective - Credit Hours: 3.00
• Agricultural Economics, Economics, Management or Technology Leadership & Innovation Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Electives - Credit Hours: 3.00-5.00

15-17 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to
persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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## Minor

### Crop Science Minor

**Requirements for the Minor (18 credits)**

**Required Courses (6 credits)**

- AGRY 25500 - Soil Science **Credits**: 3.00
- AGRY 10500 - Crop Production **Credits**: 3.00 or
- AGRY 37500 - Crop Production Systems **Credits**: 3.00

**Selective Courses (12 credits)**

- AGRY 10500 - Crop Production **Credits**: 3.00 *
- AGRY 32000 - Genetics **Credits**: 3.00
- AGRY 32100 - Genetics Laboratory **Credits**: 1.00
- AGRY 33500 - Weather And Climate **Credits**: 3.00
- AGRY 36500 - Soil Fertility **Credits**: 3.00
- AGRY 37500 - Crop Production Systems **Credits**: 3.00 *
- AGRY 48000 - Plant Genetics **Credits**: 3.00
- AGRY 48500 - Precision Crop Management **Credits**: 3.00
- AGRY 50500 - Forage Management **Credits**: 3.00
- AGRY 51500 - Plant Mineral Nutrition **Credits**: 3.00
- AGRY 52000 - Principles And Methods Of Plant Breeding **Credits**: 3.00
- BTNY 30100 - Introductory Plant Pathology **Credits**: 3.00
- BTNY 30400 - Introductory Weed Science **Credits**: 3.00
- BTNY 35000 - Biotechnology In Agriculture **Credits**: 3.00
- ENTM 20600 - General Entomology **Credits**: 2.00
- ENTM 20700 - General Entomology Laboratory **Credits**: 1.00
- AGRY 52500 - Crop Physiology And Ecology **Credits**: 3.00 or
- HORT 30100 - Plant Physiology **Credits**: 4.00
Notes

- Departmental permission is not required to enroll in this minor.
- Students majoring in the Department of Agronomy cannot obtain a Crop Science minor.
- * If not used above as a required course.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Soil Science Minor

Requirements for the Minor (18 credits)

Required Courses (6 credits)

- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00

Selective Courses (12 credits)

- AGRY 12500 - Environmental Science And Conservation Credits: 3.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 33700 - Environmental Hydrology Credits: 3.00
- AGRY 33800 - Environmental Field Skills Credits: 1.00
- AGRY 34900 - Soil Ecology Credits: 3.00
- AGRY 35500 - Soil Morphology And Geography Credits: 2.00
- AGRY 45000 - Soil Conservation and Water Management Credits: 3.00
- AGRY 46500 - Soil Physical Properties Credits: 3.00
- AGRY 54000 - Soil Chemistry Credits: 3.00
- AGRY 54400 - Environmental Organic Chemistry Credits: 3.00
- AGRY 54500 - Remote Sensing Of Land Resources Credits: 3.00
- AGRY 55500 - Soil And Plant Analysis Credits: 3.00
- AGRY 56000 - Soil Physics Credits: 3.00
- AGRY 56500 - Soils And Landscapes Credits: 3.00
- AGRY 58000 - Soil And Rhizosphere Microbiology Credits: 3.00
• AGRY 58500 - Soils And Land Use Credits: 3.00

Notes

• Departmental permission is not required to enroll in this minor.
• Students majoring in the Department of Agronomy cannot obtain a Soil Science minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Non-Degree

Agronomy Supplemental Information

Agronomy Major Selectives

Ecology or Plant Ecology Selective (3 credits)

• AGRY 34900 - Soil Ecology Credits: 3.00
• BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
• BIOL 48300 - Great Issues: Environmental And Conservation Biology Credits: 3.00
• BTNY 30200 - Plant Ecology Credits: 3.00
• EEE 30000 - Environmental And Ecological Systems Modeling Credits: 3.00
• ENTM 31100 - Insect Ecology Credits: 3.00
• FNR 20100 - Marine Biology Credits: 3.00
• FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
• FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
• FNR 35900 - Spatial Ecology And GIS Credits: 3.00
• SFS 30100 - Agroecology Credits: 3.00

Concentration Specific Selectives

Agronomic Business and Marketing Concentration
Agronomy Crops Selective (3 credits)

- AGRY 10500 - Crop Production Credits: 3.00
- AGRY 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
- AGRY 21100 - Fundamentals Of Turfgrass Culture Laboratory Credits: 1.00
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 37500 - Crop Production Systems Credits: 3.00
- AGRY 48000 - Plant Genetics Credits: 3.00
- AGRY 50500 - Forage Management Credits: 3.00
- AGRY 51000 - Turfgrass Science Credits: 3.00
- AGRY 51100 - Population Genetics Credits: 3.00
- AGRY 51200 - Integrated Turfgrass Systems Credits: 3.00
- AGRY 51500 - Plant Mineral Nutrition Credits: 3.00
- AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
- AGRY 55000 - Field Crops Breeding Techniques Credits: 2.00
- ANSC 51100 - Population Genetics Credits: 3.00

Agronomy: International Agronomy Concentration

Agriculture or Science Selectives (6 credits)

- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
- AGEC 45100 - Applied Econometrics Credits: 3.00
- AGRY 27000 - Forest Soils Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 46500 - Soil Physical Properties Credits: 3.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- BCHM 10000 - Introduction To Biochemistry Credits: 2.00
- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
- BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- CHM 22400 - Introductory Quantitative Analysis Credits: 4.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- CHM 25700 - Organic Chemistry Credits: 4.00
- CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
- CHM 26100 - Organic Chemistry I Credits: 3.00
- CHM 26200 - Organic Chemistry II Credits: 3.00
- CHM 26300 - Organic Chemistry Laboratory I Credits: 1.00
- CHM 26400 - Organic Chemistry Laboratory II Credits: 1.00
- CS 18000 - Problem Solving And Object-Oriented Programming Credits: 4.00
- EAPS 11100 - Physical Geology Credits: 3.00
- EAPS 11200 - Earth Through Time Credits: 3.00
- EAPS 22100 - Survey Of Atmospheric Science Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
- FNR 20100 - Marine Biology Credits: 3.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 24000 - Wildlife In America Credits: 3.00
- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- HONR 49900 - Honors Research Project Credits: 1.00 to 6.00
- HORT 30100 - Plant Physiology Credits: 4.00
- MA 16020 - Applied Calculus II Credits: 3.00
- MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- MA 26100 - Multivariate Calculus Credits: 4.00
- MA 26500 - Linear Algebra Credits: 3.00
- NRES 23000 - Survey Of Meteorology Credits: 3.00
- NRES 25500 - Soil Science Credits: 3.00
- PHYS 17200 - Modern Mechanics Credits: 4.00
- PHYS 21400 - The Nature Of Physics Credits: 3.00
- PHYS 22000 - General Physics Credits: 4.00
- PHYS 22100 - General Physics Credits: 4.00
- PHYS 23300 - Physics For Life Sciences I Credits: 4.00
- PHYS 23400 - Physics For Life Sciences II Credits: 4.00
- PHYS 24100 - Electricity And Optics Credits: 3.00
- STAT 50200 - Experimental Statistics II Credits: 3.00
- STAT 51100 - Statistical Methods Credits: 3.00
- STAT 51200 - Applied Regression Analysis Credits: 3.00

Foreign Language Selectives (9 Credits)

- ARAB 10000:59999
Conversation Language Selective (2 Credits)

- FR 11200 - Elementary French Conversation Credits: 1.00
- FR 21200 - Intermediate French Conversation Credits: 1.00
- GER 11200 - Elementary German Conversation Credits: 1.00
- GER 21200 - Intermediate German Conversation Credits: 1.00
- ITAL 11200 - Elementary Italian Conversation Credits: 1.00
- ITAL 21200 - Intermediate Italian Conversation Credits: 1.00
- RUSS 11100 - Conversation Supplement To Russian Level I Credits: 1.00

College of Agriculture: Additional Mathematics or Science Selectives

- AGR 33300 - Data Science For Agriculture Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
- AGEC 45100 - Applied Econometrics Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 27000 - Forest Soils Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 46500 - Soil Physical Properties Credits: 3.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- BCHM 10000 - Introduction To Biochemistry Credits: 2.00
- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
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<td>BTNY 11000</td>
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<td>Earth Through Time</td>
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<td>ENTM 32810</td>
<td>Practical Molecular Biology</td>
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<td>ENTM 35300</td>
<td>Insecticides And Environment</td>
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<tr>
<td>ENTM 41000</td>
<td>Applied Insect Biology</td>
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<td>ENTM 41001</td>
<td>Insects Of Urban Landscapes</td>
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<td>FNR 12500</td>
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<td>FNR 20100</td>
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<tr>
<td>FNR 23000</td>
<td>The World's Forests And Society</td>
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<td>FNR 24000</td>
<td>Wildlife In America</td>
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<td>FNR 24150</td>
<td>Ecology And Systematics Of Fishes, Amphibians And Reptiles</td>
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<td>FNR 25150</td>
<td>Ecology And Systematics Of Mammals And Birds</td>
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<td>FNR 30500</td>
<td>Conservation Genetics</td>
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<td>FNR 35700</td>
<td>Fundamental Remote Sensing</td>
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<td>Fundamentals Of Horticulture</td>
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<td>HORT 30100</td>
<td>Plant Physiology</td>
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• MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
• MA 26100 - Multivariate Calculus Credits: 4.00
• MA 26500 - Linear Algebra Credits: 3.00
• NRES 12500 - Environmental Science And Conservation Credits: 3.00
• NRES 23000 - Survey Of Meteorology Credits: 3.00
• NRES 25500 - Soil Science Credits: 3.00
• PHYS 17200 - Modern Mechanics Credits: 4.00
• PHYS 21400 - The Nature Of Physics Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• PHYS 22100 - General Physics Credits: 4.00
• PHYS 23300 - Physics For Life Sciences I Credits: 4.00
• PHYS 23400 - Physics For Life Sciences II Credits: 4.00
• PHYS 24100 - Electricity And Optics Credits: 3.00
• STAT 22500 - Introduction To Probability Models Credits: 3.00
• STAT 50200 - Experimental Statistics II Credits: 3.00
• STAT 51100 - Statistical Methods Credits: 3.00
• STAT 51200 - Applied Regression Analysis Credits: 3.00

Digital Agronomy Supplemental Information

Digital Agronomy Supplemental Information

Advanced Crop Science Selectives (6 credits)

Advanced Crop Science Selectives (6 credits)

• AGRY 50500 - Forage Management Credits: 3.00
• AGRY 51500 - Plant Mineral Nutrition Credits: 3.00
• AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00

Advanced Soil Science Selectives (6 credits)

Advanced Soil Science Selectives (6 credits)

• AGRY 33700 - Environmental Hydrology Credits: 3.00
• AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
• AGRY 45000 - Soil Conservation and Water Management Credits: 3.00
• AGRY 56000 - Soil Physics Credits: 3.00
• AGRY 56500 - Soils And Landscapes Credits: 3.00
• EAPS 51800 - Soil Biogeochemistry Credits: 3.00

Bioinformatics and Biotechnology Selective (3 credits)

Bioinformatics and Biotechnology Selective (3 credits)

• AGRY 32000 - Genetics Credits: 3.00
• AGRY 34900 - Soil Ecology Credits: 3.00
• AGRY 58000 - Soil And Rhizosphere Microbiology Credits: 3.00
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00

Data Management Selective (3 credits)

• AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
• AGR 33300 - Data Science For Agriculture Credits: 3.00
• ASM 10500 - Computing Technology With Applications Credits: 3.00
• ENTM 24200 - Data Science Credits: 3.00

Data Literacy & Analytics Selective (3 credits)

• ECE 30010 - Introduction To Machine Learning And Pattern Recognition Credits: 3.00
• STAT 22500 - Introduction To Probability Models Credits: 3.00
• TDM 10100 - The Data Mine Seminar I Credits: 1.00
• TDM 10200 - The Data Mine Seminar II Credits: 1.00
• TDM 20100 - The Data Mine Seminar III Credits: 1.00
• TDM 20200 - The Data Mine Seminar IV Credits: 1.00
• TDM 30100 - The Data Mine Seminar V Credits: 1.00
• TDM 30200 - The Data Mine Seminar VI Credits: 1.00
• TDM 40100 - The Data Mine Seminar VII Credits: 1.00
• TDM 40200 - The Data Mine Seminar VIII Credits: 1.00

Plant Genetics, Plant Breeding & Biotechnology Supplemental Information

Directed Selective (12 Credits)

• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
• AGRY 33500 - Weather And Climate Credits: 3.00
• AGRY 36500 - Soil Fertility Credits: 3.00
• AGRY 37500 - Crop Production Systems Credits: 3.00
• AGRY 48500 - Precision Crop Management Credits: 3.00
• AGRY 50500 - Forage Management Credits: 3.00
• AGRY 51800 - Plant Physiology And Biotechnology Research Techniques Credits: 3.00
• AGRY 55000 - Field Crops Breeding Techniques Credits: 2.00
• ANSC 51100 - Population Genetics Credits: 3.00
• BCHM 56100 - General Biochemistry I Credits: 3.00
• BCHM 56200 - General Biochemistry II Credits: 3.00
• BIOL 42000 - Eukaryotic Cell Biology Credits: 3.00
• BIOL 44100 - Biology Senior Seminar In Genetics Credits: 1.00
• BIOL 54200 - Modular Upper-Division Laboratory Course Credits: 1.00 or 2.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30400 - Introductory Weed Science Credits: 3.00
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
- BTNY 52500 - Intermediate Plant Pathology Credits: 3.00
- BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
- BTNY 55300 - Plant Growth And Development Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- MA 26500 - Linear Algebra Credits: 3.00

Soil & Water Sciences Supplemental Information

Crop or Plant Science Selective (3 Credits)

- BTNY 21100:59999
- AGRY 10500 - Crop Production Credits: 3.00
- AGRY 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
- AGRY 21100 - Fundamentals Of Turfgrass Culture Laboratory Credits: 1.00
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 50500 - Forage Management Credits: 3.00
- AGRY 51000 - Turfgrass Science Credits: 3.00
- AGRY 51100 - Population Genetics Credits: 3.00
- AGRY 51200 - Integrated Turfgrass Systems Credits: 3.00
- AGRY 51500 - Plant Mineral Nutrition Credits: 3.00
- AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
- AGRY 55000 - Field Crops Breeding Techniques Credits: 2.00
- HORT 20100 - Plant Propagation Credits: 3.00
- HORT 21700 - Woody Landscape Plants Credits: 4.00

Ecology Selective (3 Credits)

- AGRY 34900 - Soil Ecology Credits: 3.00
- BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
- BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
- BIOL 48300 - Great Issues: Environmental And Conservation Biology Credits: 3.00
- BTNY 30200 - Plant Ecology Credits: 3.00
- EEE 30000 - Environmental And Ecological Systems Modeling Credits: 3.00
- ENTM 31100 - Insect Ecology Credits: 3.00
- FNR 20100 - Marine Biology Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 35900 - Spatial Ecology And GIS Credits: 3.00

Engineering or Science Selective (3 Credits)
- ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- ABE 52200 - Ecohydrology Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 27000 - Forest Soils Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGEC 45100 - Applied Econometrics Credits: 3.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 4.00
- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
- BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- CE 35000 - Introduction To Environmental And Ecological Engineering Credits: 3.00
- CE 35500 - Engineering Environmental Sustainability Credits: 3.00
- CE 54200 - Hydrology Credits: 3.00
- CHM 22400 - Introductory Quantitative Analysis Credits: 4.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- CHM 25700 - Organic Chemistry Credits: 4.00
- CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
- CHM 26100 - Organic Chemistry I Credits: 3.00
- CHM 26200 - Organic Chemistry II Credits: 3.00
- CHM 26300 - Organic Chemistry Laboratory I Credits: 1.00
- CHM 26400 - Organic Chemistry Laboratory II Credits: 1.00
- EAPS 11100 - Physical Geology Credits: 3.00
- EAPS 11200 - Earth Through Time Credits: 3.00
- EAPS 22100 - Survey Of Atmospheric Science Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
- MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00
- MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
- MA 26100 - Multivariate Calculus Credits: 4.00
- MA 26500 - Linear Algebra Credits: 3.00
- NRES 25500 - Soil Science Credits: 3.00
- 

**Department of Animal Sciences**

**Overview**

The Purdue University Department of Animal Sciences promotes leadership and inspiration to educate students, enabling them to anticipate and effectively respond to challenges facing the global animal industries. The Animal Sciences faculty conducts relevant scientific research and facilitates technology transfer for efficient and sustainable production of high quality animal products, optimizing animal well-being, enhancing the human diet, and advancing sound environmental practices.

The vision of the Department of Animal Sciences is simple. We desire to be the "place to go" for the citizens of Indiana and beyond for knowledge in animal sciences. This includes students, commodity groups, industry partners, government agencies, consumers, and many others. Our shared goals are to:

- provide students with a rigorous and relevant education, preparing them for a lifetime of learning;
- achieve scientific preeminence in selected areas, and develop teams to identify and solve real world problems; and
- meet the needs of our diverse clientele making the best use of emerging technologies.

The Animal Sciences faculty has expertise in the disciplines of growth and development, nutrition, breeding and genetics, physiology, management, and animal well-being and behavior. In addition, scientists in the USDA Livestock Behavior Unit associated with Purdue are adjunct faculty members.

**Concentrations include:**

- Animal Agribusiness
- Behavior/Well-Being
- Biosciences
- Pre-Veterinary Medicine
- Production & Industry

**Prospective Students (website)**

**Current Students (website)**

**Faculty (website)**

**Animal Sciences (website)**
Contact Information

Department of Animal Sciences
Creighton Hall of Animal Sciences
270 S. Russell Street
West Lafayette, IN 47907-2041
765-494-4843
Email: ansc4you@purdue.edu

Main Office: 1014 Creighton Hall of Animal Sciences
Student Service Office: 1058 Creighton Hall of Animal Sciences

Bachelor of Science

Animal Sciences: Animal Agribusiness Concentration, BS

About the Program

Experience with raising and managing of animals is essential since you will be expected to interact and relate to managers, veterinarians, businessmen, and owners of animal enterprises. An interest in economics, marketing, and business management is important

Animal Sciences Website
Animal Sciences Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (75 credits)

Required Major Courses (30 credits)

- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00 (satisfies Science, Technology & Society for core)
- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
• ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
• ANSC 24000 - Principles Of Animal Production Credits: 3.00
• ANSC 25500 - Principles Of Animal Products Credits: 3.00
• ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
• ANSC 33300 - Physiology Of Reproduction Credits: 3.00
• ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)
  Animal Management Selective - Credit Hours: 3.00
• ANSC 44000 - Horse Management Credits: 3.00
• ANSC 44100 - Beef Management Credits: 3.00
• ANSC 44200 - Sheep Management Credits: 3.00
• ANSC 44300 - Swine Management Credits: 3.00
• ANSC 44400 - Dairy Management Credits: 3.00
• ANSC 44500 - Commercial Poultry Management Credits: 3.00
• ANSC 44600 - Companion Animal Management Credits: 3.00

Animal Agribusiness Concentration Requirements (45 credits)

Concentration Required Courses (37 credits)

• AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• CHM 25700 - Organic Chemistry Credits: 4.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
  MGMT 21200 - Business Accounting Credits: 3.00
  Agricultural Economics, Economics, or Management Selective - Credit Hours: 12.00
• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
• AGEC 30500: 49800
• ECON 21900: 49900
• MGMT 20100: 49000

Animal Sciences Restricted Selectives (10 credits)

10 credits from a minimum of 3 of the following course groupings

Animal Behavior Well-Being Selective
• ANSC 30300 - Animal Behavior Credits: 3.00
• ANSC 40400 - Animal Welfare Credits: 3.00
  Animal Genetics Selective
• AGRY 32000 - Genetics Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00
• ANSC 51300 - Design Of Animal Breeding Programs Credits: 3.00
• ANSC 51400 - Animal Biotechnology Credits: 3.00
• BIOL 41500 - Introduction To Molecular Biology Credits: 3.00
Animal Nutrition Selective
- ANSC 32500 - Applied Ruminant Nutrition Credits: 2.00
- ANSC 32600 - Applied Non-ruminant Nutrition Credits: 2.00
- ANSC 52200 - Monogastric Nutrition Credits: 3.00
- ANSC 52400 - Ruminant Nutrition And Physiology Credits: 3.00

Animal Physiology Selective
- ANSC 33200 - Environmental Physiology Of Domestic Animals Credits: 2.00
- ANSC 41500 - Advanced Animal Physiology Credits: 3.00
- ANSC 42500 - Ruminant Reproductive Farm Management Credits: 2.00
- ANSC 42600 - Non-ruminant Reproductive Farm Management Credits: 2.00
- ANSC 55500 - Animal Growth And Development Credits: 3.00

Animal Products Selective
- ANSC 30100 - Animal Growth, Development, And Evaluation Credits: 2.00
- ANSC 35100 - Meat Science Credits: 3.00
- ANSC 35101 - Meat Science Laboratory Credits: 1.00
- ANSC 36000 - Muscle Food Production And Safety Credits: 3.00
- ANSC 55200 - Advanced Meat Science Credits: 3.00

Animal Management Selective (NOTE: This would be in addition to the required course) - Credit Hours: 3.00
- ANSC 44000 - Horse Management Credits: 3.00
- ANSC 44100 - Beef Management Credits: 3.00
- ANSC 44200 - Sheep Management Credits: 3.00
- ANSC 44300 - Swine Management Credits: 3.00
- ANSC 44400 - Dairy Management Credits: 3.00
- ANSC 44500 - Commercial Poultry Management Credits: 3.00
- ANSC 44600 - Companion Animal Management Credits: 3.00

Other Departmental/Program Course Requirements (36-37 credits)
- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)

Economics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00

Other Humanities or Social Science Course Options
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
Electives (8-9 credits)

- Electives - Credit Hours: 8.00-9.00

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.
- ANSC courses must be at 2.0 or higher GPA to earn a BS in Animal Sciences

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- CHM 11200 - General Chemistry Credits: 3.00 ♦
• MA 16010 - Applied Calculus I Credits: 3.00
• Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

• AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
• ANSC 25500 - Principles Of Animal Products Credits: 3.00
• Economics Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

18 Credits

Spring 2nd Year

• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
• ANSC 24000 - Principles Of Animal Production Credits: 3.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00

17 Credits

Fall 3rd Year

• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• ANSC 33300 - Physiology Of Reproduction Credits: 3.00
• MGMT 20000 - Introductory Accounting Credits: 3.00 or
• MGMT 21200 - Business Accounting Credits: 3.00
• Agricultural Economics, Economics, or Management Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
• Agricultural Economics, Economics, or Management Selective - Credit Hours: 3.00
• Animal Sciences Restricted Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

13 Credits
Fall 4th Year

- ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00
- Animal Sciences Restricted Selective - Credit Hours: 3.00
- Animal Management Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Electives - Credit Hours: 3.00

13 Credits

Spring 4th Year

- Animal Sciences Restricted Selective - Credit Hours: 4.00
- Agricultural Economics, Economics, or Management Selective - Credit Hours: 6.00
- Elective - Credit Hours: 3.00
- Electives - Credit Hours: 0.00-1.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.
Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Animal Sciences: Animal Production and Industry Concentration, BS**

**About the Program**

You may be well suited for animal agribusiness if you enjoy engaging with people, have strong written and oral communication skills.

Animal Sciences Website

Animal Sciences Major Change (CODO) Requirements

**Degree Requirements**

**120 Credits Required**

**Departmental/Program Major Courses (71 credits)**

**Required Major Courses (30 credits)**

- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00 (satisfies Science, Technology & Society for core)
- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- ANSC 24000 - Principles Of Animal Production Credits: 3.00
- ANSC 25500 - Principles Of Animal Products Credits: 3.00
- ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
- ANSC 33300 - Physiology Of Reproduction Credits: 3.00
- ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)

**Animal Management Selective** - Credit Hours: 3.00

- ANSC 44000 - Horse Management Credits: 3.00
- ANSC 44100 - Beef Management Credits: 3.00
- ANSC 44200 - Sheep Management Credits: 3.00
- ANSC 44300 - Swine Management Credits: 3.00
- ANSC 44400 - Dairy Management Credits: 3.00
- ANSC 44500 - Commercial Poultry Management Credits: 3.00
- ANSC 44600 - Companion Animal Management Credits: 3.00
Animal Production and Industry Concentration Requirements (41 credits)

Required Concentration Courses (31 credits)

- BCHM 30700 - Biochemistry Credits: 3.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- CHM 25700 - Organic Chemistry Credits: 4.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 or
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
  Animal Products Selective - Credit Hours: 3.00
- ANSC 30100 - Animal Growth, Development, And Evaluation Credits: 2.00
- ANSC 35100 - Meat Science Credits: 3.00
- ANSC 35101 - Meat Science Laboratory Credits: 1.00
- ANSC 36000 - Muscle Food Production And Safety Credits: 3.00
- ANSC 55200 - Advanced Meat Science Credits: 3.00

Financial Management Selective - Credit Hours: 3.00

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- CSR 34200 - Personal Finance Credits: 3.00
- MGMT 20000 - Introductory Accounting Credits: 3.00
- MGMT 21200 - Business Accounting Credits: 3.00
- Enterprise Management Selective - Credit Hours: 6.00
- Production Management Selective - Credit Hours: 3.00

Animal Sciences Restricted Selectives (10 credits)

10 credits from a minimum of 3 of the following course groupings

Animal Behavior/Well-Being
- ANSC 30300 - Animal Behavior Credits: 3.00
- ANSC 40400 - Animal Welfare Credits: 3.00

Animal Genetics Selective
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- ANSC 51300 - Design Of Animal Breeding Programs Credits: 3.00
- ANSC 51400 - Animal Biotechnology Credits: 3.00
- BIOL 41500 - Introduction To Molecular Biology Credits: 3.00

Animal Nutrition Selective
- ANSC 32500 - Applied Ruminant Nutrition Credits: 2.00
- ANSC 32600 - Applied Non-ruminant Nutrition Credits: 2.00
- ANSC 52200 - Monogastric Nutrition Credits: 3.00
- ANSC 52400 - Ruminant Nutrition And Physiology Credits: 3.00

Animal Physiology Selective
- ANSC 33200 - Environmental Physiology Of Domestic Animals Credits: 2.00
• ANSC 41500 - Advanced Animal Physiology Credits: 3.00
• ANSC 42500 - Ruminant Reproductive Farm Management Credits: 2.00
• ANSC 42600 - Non-ruminant Reproductive Farm Management Credits: 2.00
• ANSC 55500 - Animal Growth And Development Credits: 3.00

Animal Management Selective (NOTE: This would be in addition to the required course) - Credit Hours: 3.00
• ANSC 44000 - Horse Management Credits: 3.00
• ANSC 44200 - Sheep Management Credits: 3.00
• ANSC 44300 - Swine Management Credits: 3.00
• ANSC 44400 - Dairy Management Credits: 3.00
• ANSC 44500 - Commercial Poultry Management Credits: 3.00
• ANSC 44600 - Companion Animal Management Credits: 3.00

Other Departmental/Program Course Requirements (40-41 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
• BIOL 22100 - Introduction To Microbiology Credits: 4.00 ♦ (satisfies Science #2 for core)
• STAT 30100 - Elementary Statistical Methods Credits: 3.00

Economics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (8-9 credits)

• Electives - Credit Hours: 8.00-9.00

Supplemental List

Animal Sciences Supplemental Information

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.
Minimum 2.0 GPA required in Animal Science courses.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement
The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 or
- MA 16010 - Applied Calculus I Credits: 3.00
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
• ANSC 24000 - Principles Of Animal Production Credits: 3.00
• Economics Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

16 Credits

Spring 2nd Year

• ANSC 25500 - Principles Of Animal Products Credits: 3.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• Enterprise Management Selective - Credit Hours: 3.00
• Financial Management Selective - Credit Hours: 3.00

16 Credits

Fall 3rd Year

• ANSC 33300 - Physiology Of Reproduction Credits: 3.00
• BCHM 30700 - Biochemistry Credits: 3.00
• Animal Restricted Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
• ANSC Restricted Selective - Credit Hours: 4.00
• ANSC Restricted Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Production Management Selective - Credit Hours: 3.00

17 Credits

Fall 4th Year

• ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• Animal Management Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Elective - Credit Hours: 2.00

13 Credits
Spring 4th Year

- Animal Products Selective - Credit Hours: 3.00
- Enterprise Management - Credit Hours: 3.00
- Electives - Credit Hours: 3.00
- Electives - Credit Hours: 3.00-4.00

12-13 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Animal Sciences: Behavior/Well-Being Concentration, BS
About the Program

Students desiring a balance of animal production, behavioral sciences, and animal welfare are best served by this option in the department of Animal Sciences. Careers available as managers of animal production units (e.g., beef cow-calf or feedlot manager, flock supervisor, swine manager or horse trainer or breeder), animal auditors and animal welfare specialists. Limited career opportunities may be available as an animal trainer, zookeeper, companion animal consultant, animal care technician, and animal safety education specialist for a humane society. Students interested in advanced studies can pursue careers as animal behavior consultants, veterinarians, or university staff or faculty members.

Animal Sciences

See ANSC Undergraduate Student Handbook for more information.

Animal Sciences Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (73 credits)

Required Major Courses (30 credits)

- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00 (satisfies Science, Technology & Society for core)
- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- ANSC 24000 - Principles Of Animal Production Credits: 3.00
- ANSC 25500 - Principles Of Animal Products Credits: 3.00
- ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
- ANSC 33300 - Physiology Of Reproduction Credits: 3.00
- ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)

Animal Management Selective - Credit Hours: 3.00
- ANSC 44000 - Horse Management Credits: 3.00
- ANSC 44100 - Beef Management Credits: 3.00
- ANSC 44200 - Sheep Management Credits: 3.00
- ANSC 44300 - Swine Management Credits: 3.00
- ANSC 44400 - Dairy Management Credits: 3.00
- ANSC 44500 - Commercial Poultry Management Credits: 3.00
- ANSC 44600 - Companion Animal Management Credits: 3.00

Behavior/Well-Being Concentration Requirements (43 credits)

Required Concentration Courses (33 Credits)

- ANSC 30300 - Animal Behavior Credits: 3.00
- ANSC 40400 - Animal Welfare Credits: 3.00
- BCHM 30700 - Biochemistry Credits: 3.00
- CHM 11500 - General Chemistry Credits: 4.00 ♦ (satisfies Science #1 for core)
- CHM 11600 - General Chemistry Credits: 4.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- CHM 25700 - Organic Chemistry Credits: 4.00
- PSY 12000 - Elementary Psychology Credits: 3.00
- Behavior/Well-Being Selective - Credit Hours: 6.00 (see Animal Sciences Supplemental List)

Animal Sciences Restricted Selectives (10 credits)

Choose 10 credits from 3 different sections below

**Animal Genetics Selective**
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- ANSC 51300 - Design Of Animal Breeding Programs Credits: 3.00
- ANSC 51400 - Animal Biotechnology Credits: 3.00
- BIOL 41500 - Introduction To Molecular Biology Credits: 3.00

**Animal Nutrition Selective**
- ANSC 32500 - Applied Ruminant Nutrition Credits: 2.00
- ANSC 32600 - Applied Non-ruminant Nutrition Credits: 2.00
- ANSC 52200 - Monogastric Nutrition Credits: 3.00
- ANSC 52400 - Ruminant Nutrition And Physiology Credits: 3.00

**Animal Physiology Selective**
- ANSC 33200 - Environmental Physiology Of Domestic Animals Credits: 2.00
- ANSC 41500 - Advanced Animal Physiology Credits: 3.00
- ANSC 42500 - Ruminant Reproductive Farm Management Credits: 2.00
- ANSC 42600 - Non-ruminant Reproductive Farm Management Credits: 2.00
- ANSC 55500 - Animal Growth And Development Credits: 3.00

**Animal Products Selective**
- ANSC 30100 - Animal Growth, Development, And Evaluation Credits: 2.00
- ANSC 35100 - Meat Science Credits: 3.00
- ANSC 35101 - Meat Science Laboratory Credits: 1.00
- ANSC 36000 - Muscle Food Production And Safety Credits: 3.00
- ANSC 55200 - Advanced Meat Science Credits: 3.00

**Animal Management Selective** (NOTE: This would be in addition to the required course) - Credit Hours: 3.00
- ANSC 44000 - Horse Management Credits: 3.00
- ANSC 44100 - Beef Management Credits: 3.00
- ANSC 44200 - Sheep Management Credits: 3.00
- ANSC 44300 - Swine Management Credits: 3.00
- ANSC 44400 - Dairy Management Credits: 3.00
- ANSC 44500 - Commercial Poultry Management Credits: 3.00
- ANSC 44600 - Companion Animal Management Credits: 3.00

Other Departmental /Program Course Requirements (36-37 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (10-11 credits)

• Electives - Credit Hours: 10.00-11.00

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.
• 2.0 GPA required for Animal Science Courses.

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

• Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00
College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill *most, if not all,* of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

## Sample 4-Year Plan

### Fall 1st Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR 10100 - Introduction To The College Of Agriculture And Purdue University</td>
<td>0.50</td>
</tr>
<tr>
<td>AGR 11400 - Introduction To Animal Sciences Academic Programs</td>
<td>0.50</td>
</tr>
<tr>
<td>ANSC 10200 - Introduction To Animal Agriculture</td>
<td>3.00</td>
</tr>
<tr>
<td>BIOL 11000 - Fundamentals Of Biology I</td>
<td>4.00</td>
</tr>
<tr>
<td>CHM 11500 - General Chemistry</td>
<td>4.00</td>
</tr>
<tr>
<td>MA 16010 - Applied Calculus I</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**15 Credits**

### Spring 1st Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 12100 - Ethics Of Animal Use</td>
<td>2.00</td>
</tr>
<tr>
<td>ANSC 18100 - Orientation To Animal Sciences</td>
<td>1.00</td>
</tr>
<tr>
<td>BIOL 11100 - Fundamentals Of Biology II</td>
<td>4.00</td>
</tr>
<tr>
<td>CHM 11600 - General Chemistry</td>
<td>4.00</td>
</tr>
<tr>
<td>Written Communication Selective</td>
<td>3.00-4.00</td>
</tr>
<tr>
<td>Elective</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**15-16 Credits**

### Fall 2nd Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 22100 - Principles Of Animal Nutrition</td>
<td>3.00</td>
</tr>
<tr>
<td>ANSC 24000 - Principles Of Animal Production</td>
<td>3.00</td>
</tr>
<tr>
<td>CHM 25700 - Organic Chemistry</td>
<td>4.00</td>
</tr>
<tr>
<td>PSY 12000 - Elementary Psychology</td>
<td>3.00</td>
</tr>
<tr>
<td>Oral Communication Selective</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**16 Credits**

### Spring 2nd Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 23000 - Physiology Of Domestic Animals</td>
<td>4.00</td>
</tr>
<tr>
<td>ANSC 25500 - Principles Of Animal Products</td>
<td>3.00</td>
</tr>
<tr>
<td>STAT 30100 - Elementary Statistical Methods</td>
<td>3.00</td>
</tr>
<tr>
<td>Human Cultures: Humanities Selective</td>
<td>3.00</td>
</tr>
<tr>
<td>Economics Selective</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**16 Credits**
Fall 3rd Year

- ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
- ANSC 33300 - Physiology Of Reproduction Credits: 3.00
- ANSC 40400 - Animal Welfare Credits: 3.00
- BCHM 30700 - Biochemistry Credits: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

16 Credits

Spring 3rd Year

- ANSC 30300 - Animal Behavior Credits: 3.00
- Animal Sciences Restricted Selective - Credit Hours: 2.00
- Animal Behavior/Well-being Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

14 Credits

Fall 4th Year

- ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)
- Animal Behavior/Well-being Selective - Credit Hours: 3.00
- Animal Management Selective - Credit Hours: 3.00
- Animal Sciences Restricted Selective - Credit Hours: 2.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 2.00

14 Credits

Spring 4th Year

- Animal Science Restricted Selective - Credit Hours: 3.00
- Animal Science Restricted Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Electives - Credit Hours: 4.00-5.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses
World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Animal Sciences: Biosciences Concentration, BS

About the Program

The Department of Animal Sciences offers this specialization that is intended for students seeking careers in research or technical services related to animal nutrition, growth and development, animal genetics, reproduction, animal well-being, and management.

Animal Sciences Website

Animal Sciences Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (71 credits)

Required Major Courses (30 credits)

- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00 (satisfies Science, Technology & Society for core)
- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
• ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
• ANSC 24000 - Principles Of Animal Production Credits: 3.00
• ANSC 25500 - Principles Of Animal Products Credits: 3.00
• ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
• ANSC 33300 - Physiology Of Reproduction Credits: 3.00
• ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)  
  Animal Management Selective - Credit Hours: 3.00
• ANSC 44000 - Horse Management Credits: 3.00
• ANSC 44100 - Beef Management Credits: 3.00
• ANSC 44200 - Sheep Management Credits: 3.00
• ANSC 44300 - Swine Management Credits: 3.00
• ANSC 44400 - Dairy Management Credits: 3.00
• ANSC 44500 - Commercial Poultry Management Credits: 3.00
• ANSC 44600 - Companion Animal Management Credits: 3.00

Biosciences Concentration Requirements (41 credits)

Concentration Required Courses (31 credits)

• BCHM 30700 - Biochemistry Credits: 3.00
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00
• CHM 11500 - General Chemistry Credits: 4.00 ♦ (satisfies Science #1 for core)
• CHM 11600 - General Chemistry Credits: 4.00 ♦ (satisfies Science #2 for core)
• CHM 25700 - Organic Chemistry Credits: 4.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• Science Selectives - Credit Hours: 12.00 (See Animal Sciences Supplemental for Bioscience Concentration Science Selectives)

Animal Science Restricted Selectives (10 credits)

10 credits from a minimum of 3 of the following course groupings

  Animal Behavior Well-Being Selective
• ANSC 30300 - Animal Behavior Credits: 3.00
• ANSC 40400 - Animal Welfare Credits: 3.00

  Animal Genetics Selective
• AGRY 32000 - Genetics Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00
• ANSC 51300 - Design Of Animal Breeding Programs Credits: 3.00
• ANSC 51400 - Animal Biotechnology Credits: 3.00
• BIOL 41500 - Introduction To Molecular Biology Credits: 3.00

  Animal Nutrition Selective
• ANSC 32500 - Applied Ruminant Nutrition Credits: 2.00
• ANSC 32600 - Applied Non-ruminant Nutrition Credits: 2.00
• ANSC 52200 - Monogastric Nutrition Credits: 3.00
• ANSC 52400 - Ruminant Nutrition And Physiology Credits: 3.00

  Animal Physiology Selective
• ANSC 33200 - Environmental Physiology Of Domestic Animals Credits: 2.00
• ANSC 41500 - Advanced Animal Physiology Credits: 3.00
• ANSC 42500 - Ruminant Reproductive Farm Management Credits: 2.00
• ANSC 42600 - Non-ruminant Reproductive Farm Management Credits: 2.00
• ANSC 55500 - Animal Growth And Development Credits: 3.00

Animal Products Selective
• ANSC 30100 - Animal Growth, Development, And Evaluation Credits: 2.00
• ANSC 35100 - Meat Science Credits: 3.00
• ANSC 35101 - Meat Science Laboratory Credits: 1.00
• ANSC 36000 - Muscle Food Production And Safety Credits: 3.00
• ANSC 55200 - Advanced Meat Science Credits: 3.00

Animal Management Selective (NOTE: This would be in addition to the required course) - Credit Hours: 3.00
• ANSC 44000 - Horse Management Credits: 3.00
• ANSC 44100 - Beef Management Credits: 3.00
• ANSC 44200 - Sheep Management Credits: 3.00
• ANSC 44300 - Swine Management Credits: 3.00
• ANSC 44400 - Dairy Management Credits: 3.00
• ANSC 44500 - Commercial Poultry Management Credits: 3.00
• ANSC 44600 - Companion Animal Management Credits: 3.00

Other Departmental/Program Course Requirements (36-37 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)

Economics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (12-13 credits)

• Electives - Credit Hours: 12.00-13.00

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.
• Minimum 2.0 GPA required in Animal Science courses.
College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.
Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
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- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- CHM 11500 - General Chemistry Credits: 4.00 ♦
- MA 16010 - Applied Calculus I Credits: 3.00

15 Credits

Spring 1st Year

- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- CHM 11600 - General Chemistry Credits: 4.00 ♦
- Written Communication Selective - Credit Hours: 3.00-4.00
- Elective - Credit Hours: 2.00

16-17 Credits

Fall 2nd Year

- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 24000 - Principles Of Animal Production Credits: 3.00
- CHM 25700 - Organic Chemistry Credits: 4.00
- Economics Selective - Credit Hours: 3.00
- Elective - Credit Hours: 2.00
15 Credits

Spring 2nd Year

- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- ANSC 25500 - Principles Of Animal Products Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00
- Science Selective - Credit Hours: 3.00

16 Credits

Fall 3rd Year

- ANSC 33300 - Physiology Of Reproduction Credits: 3.00
- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Science Selective - Credit Hours: 3.00

16 Credits

Spring 3rd Year

- ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
- Animal Sciences Restrictive Selective - Credit Hours: 4.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Science Selective - Credit Hours: 3.00

14 Credits

Fall 4th Year

- ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)
- Animal Management Selective - Credit Hours: 3.00
- Animal Science Restricted Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
- Elective - Credit Hours: 2.00

15 Credits
Spring 4th Year

- Animal Sciences Restricted Selective - Credit Hours: 3.00
- Science Selectives - Credit Hours: 3.00
- Electives - Credit Hours: 3.00
- Electives - Credit Hours: 3.00-4.00

12-13 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS-Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

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Animal Sciences: Pre-Veterinary Medicine Concentration, BS

About the Program

The Department of Animal Sciences offers this concentration that is intended for students seeking careers in veterinary medicine, research, or technical services related to animal nutrition, growth and development, animal genetics, reproduction, animal well-being, and management.
Animal Sciences Website

Animal Sciences Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (79 credits)

Required Major Courses (30 credits)

- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00 (satisfies Science, Technology, & Society for core)
- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- ANSC 24000 - Principles Of Animal Production Credits: 3.00
- ANSC 25500 - Principles Of Animal Products Credits: 3.00
- ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
- ANSC 33300 - Physiology Of Reproduction Credits: 3.00
- ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)
- Animal Management Selective - Credit Hours: 3.00
- ANSC 44000 - Horse Management Credits: 3.00
- ANSC 44100 - Beef Management Credits: 3.00
- ANSC 44200 - Sheep Management Credits: 3.00
- ANSC 44300 - Swine Management Credits: 3.00
- ANSC 44400 - Dairy Management Credits: 3.00
- ANSC 44500 - Commercial Poultry Management Credits: 3.00
- ANSC 44600 - Companion Animal Management Credits: 3.00

Pre-Veterinary Medicine Concentration Requirements (49 credits)

Concentration Required Courses (39 Credits)

- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- CHM 11500 - General Chemistry Credits: 4.00 ♦ (satisfies Science #1 for core)
- CHM 11600 - General Chemistry Credits: 4.00 ♦ (satisfies Science #2 for core)
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- PHYS 22000 - General Physics Credits: 4.00
• PHYS 22100 - General Physics Credits: 4.00
• VM 10200 - Careers In Veterinary Medicine Credits: 1.00

Animal Sciences Restricted Selectives (10 credits)

10 credits from a minimum of 3 of the following course groupings

**Animal Behavior Well-Being Selective**
- ANSC 30300 - Animal Behavior Credits: 3.00
- ANSC 40400 - Animal Welfare Credits: 3.00

**Animal Genetics Selective**
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- ANSC 51300 - Design Of Animal Breeding Programs Credits: 3.00
- ANSC 51400 - Animal Biotechnology Credits: 3.00
- BIOL 41500 - Introduction To Molecular Biology Credits: 3.00

**Animal Nutrition Selective**
- ANSC 32500 - Applied Ruminant Nutrition Credits: 2.00
- ANSC 32600 - Applied Non-ruminant Nutrition Credits: 2.00
- ANSC 52200 - Monogastric Nutrition Credits: 3.00
- ANSC 52400 - Ruminant Nutrition And Physiology Credits: 3.00

**Animal Physiology Selective**
- ANSC 33200 - Environmental Physiology Of Domestic Animals Credits: 2.00
- ANSC 41500 - Advanced Animal Physiology Credits: 3.00
- ANSC 42500 - Ruminant Reproductive Farm Management Credits: 2.00
- ANSC 42600 - Non-ruminant Reproductive Farm Management Credits: 2.00
- ANSC 55500 - Animal Growth And Development Credits: 3.00

**Animal Products Selective**
- ANSC 30100 - Animal Growth, Development, And Evaluation Credits: 2.00
- ANSC 35100 - Meat Science Credits: 3.00
- ANSC 35101 - Meat Science Laboratory Credits: 1.00
- ANSC 36000 - Muscle Food Production And Safety Credits: 3.00
- ANSC 55200 - Advanced Meat Science Credits: 3.00

**Animal Management Selective** (NOTE: This would be in addition to the required course) - Credit Hours: 3.00
- ANSC 44000 - Horse Management Credits: 3.00
- ANSC 44100 - Beef Management Credits: 3.00
- ANSC 44200 - Sheep Management Credits: 3.00
- ANSC 44300 - Swine Management Credits: 3.00
- ANSC 44400 - Dairy Management Credits: 3.00
- ANSC 44500 - Commercial Poultry Management Credits: 3.00
- ANSC 44600 - Companion Animal Management Credits: 3.00

**Other Departmental /Program Course Requirements (36-37 credits)**

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
Written Communication/Information Literacy Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

- ENGL 10600 - First Year Composition With Conferences Credits: 4.00 or
- ENGL 10800 - First Year Composition Credits: 3.00 or
- HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00 or
- SCLA 10100 - Transformative Texts, Critical Thinking And Communication I: Antiquity To Modernity Credits: 3.00

Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)

- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 or
- COM 21700 - Science Writing And Presentation Credits: 3.00 or
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00

Economics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- ECON 21000 - Principles Of Economics Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00
- Human Cultures: Humanities Selectives - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (4-5 credits)

- Electives - Credit Hours: 4.00-5.00

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.
- 2.0 GPA required in Animal Science courses.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy
Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan
Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11400 - Introduction To Animal Sciences Academic Programs Credits: 0.50
- ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- CHM 11500 - General Chemistry Credits: 4.00 ♦
- MA 16010 - Applied Calculus I Credits: 3.00

15 Credits

Spring 1st Year

- ANSC 12100 - Ethics Of Animal Use Credits: 2.00
- ANSC 18100 - Orientation To Animal Sciences Credits: 1.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- CHM 11600 - General Chemistry Credits: 4.00 ♦
- VM 10200 - Careers In Veterinary Medicine Credits: 1.00
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00 or
- ENGL 10800 - First Year Composition Credits: 3.00 or
- HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00 or
- SCLA 10100 - Transformative Texts, Critical Thinking And Communication I: Antiquity To Modernity Credits: 3.00

15-16 Credits

Fall 2nd Year

- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 24000 - Principles Of Animal Production Credits: 3.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
- CHM 25500 - Organic Chemistry For The Life Sciences Credits: 3.00
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory Credits: 1.00
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 or
- COM 21700 - Science Writing And Presentation Credits: 3.00 or
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00

16 Credits

Spring 2nd Year

- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- ANSC 25500 - Principles Of Animal Products Credits: 3.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Humanities/Social Science Selective - Credit Hours: 3.00
17 Credits

Fall 3rd Year

- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- PHYS 22000 - General Physics Credits: 4.00 or
- PHYS 23300 - Physics For Life Sciences I Credits: 4.00
- Animal Science Restricted Selective - Credit Hours: 3.00
- Human Cultures Humanities Selective - Credit Hours: 3.00

17 Credits

Spring 3rd Year

- ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
- PHYS 22100 - General Physics Credits: 4.00 or
- PHYS 23400 - Physics For Life Sciences II Credits: 4.00
- Animal Sciences Restricted Selective - Credit Hours: 3.00
- Economics Selective - Credit Hours: 3.00

14 Credits

Fall 4th Year

- ANSC 48100 - Contemporary Issues In Animal Sciences Credits: 1.00 (Capstone)
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- Animal Management Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 2.00

13 Credits

Spring 4th Year

- Animal Sciences Restricted Selective - Credit Hours: 2.00
- Humanities or Social Science Selective (30000+ level): Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level): Credit Hours: 3.00
- Elective: Credit Hours: 2.00-3.00

12-13 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.
World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Minor

Animal Science Minor

Requirements for the Minor (18 credits)

Complete one course in at least two areas.

A. Nutrition

• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00

B. Physiology

• ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
• BIOL 20300 - Human Anatomy And Physiology Credits: 4.00
• BIOL 20400 - Human Anatomy And Physiology Credits: 4.00

C. Genetics
• ANSC 31100 - Animal Breeding And Genetics Credits: 4.00
• ANSC 51100 - Population Genetics Credits: 3.00
• ANSC 51400 - Animal Biotechnology Credits: 3.00
• BIOL 41500 - Introduction To Molecular Biology Credits: 3.00

D. Products

• ANSC 30100 - Animal Growth, Development, And Evaluation Credits: 2.00
• ANSC 35100 - Meat Science Credits: 3.00

E. Electives

• Remainder of 18 credits may be completed from other courses listed above, or from Animal Sciences (ANSC) courses that are numbered 30100 or higher.
• Not more than four total credits from ANSC 37000, ANSC 37100, ANSC 37200, ANSC 47000, ANSC 47100, and ANSC 47200 may be used.
• Only one of the physiology courses listed above may be used to satisfy the minor.

Notes

• Departmental permission is not required to enroll in this minor.
• Students must achieve a minimum 2.00 grade point average in graded ANSC courses to meet minimum requirements for the Animal Sciences academic minor.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Non-Degree

Animal Sciences Supplemental Information

Behavior/Well Being Concentration

Behavior/Well Being Selective (12 credits)
- ANTH 23500 - The Great Apes Credits: 3.00
- ANTH 33500 - Primate Behavior Credits: 3.00
- ANTH 53500 - Foundations Of Biological Anthropology Credits: 3.00
- ANTH 53600 - Primate Ecology Credits: 3.00
- BIOL 58705 - Animal Communication Credits: 3.00
- BIOL 59200 - The Evolution Of Behavior Credits: 3.00
- CPB 48000 - Seminar In Animal Welfare And Human-Animal Interaction-VN Credits: 2.00
- PHIL 27000 - Biomedical Ethics Credits: 3.00
- PHIL 28000 - Ethics And Animals Credits: 3.00
- PHIL 29000 - Environmental Ethics Credits: 3.00
- PSY 22200 - Introduction To Behavioral Neuroscience Credits: 3.00
- PSY 20000 - Introduction To Cognitive Psychology Credits: 3.00

**Biosciences Concentration**

**Science Selective (12 credits)**

- AGR 33300 - Data Science For Agriculture Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 50500 - Forage Management Credits: 3.00
- ANSC 30000-59999 (maximum of 6 credits allowed from this range)
- ASM 59100 - Special Topics Credits: 1.00 to 4.00
- BCHM 22100 - Analytical Biochemistry Credits: 3.00
- BCHM 32200-59900
- BME 50100 - Multivariate Analyses In Biostatistics Credits: 3.00
- BIOL 32200-59900
- CHM 29000 - Selected Topics In Chemistry For Lower-Division Students Credits: 1.00 to 4.00
- CHM 22400 - Introductory Quantitative Analysis Credits: 4.00
- CHM 32100-49000
- CNIT 22700 - Introduction To Bioinformatics Credits: 2.00
- CNIT 26700 - Introduction To C++ Language Programming Credits: 3.00
- CS 14500-59900
- ENTM 22820 - Forensic Analysis Credits: 4.00
- ENTM 24200 - Data Science Credits: 3.00
- ENTM 52500 - Medical And Veterinary Entomology Credits: 3.00
- FS 34100 - Food Processing I Credits: 2.00
- FS 36200 - Food Microbiology Credits: 3.00
- FS 44200 - Food Processing II Credits: 2.00
- HORT 53000 - Introduction To Computing For Biologists Credits: 3.00
- HSCI 56000 - Toxicology Credits: 3.00
- PHIL 42100 - Philosophy Of Science Credits: 3.00
- PHYS 17200 - Modern Mechanics Credits: 4.00
- IET 31600 - Statistical Quality Control Credits: 3.00
- PHYS 21800-25200
- PHYS 27200-49900
- STAT 50000-59999

**Animal Production and Industry Concentration**
Enterprise Management Selective (6 credits)

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 30500 - Agricultural Prices Credits: 3.00
- AGEC 31000 - Farm Organization Credits: 3.00
- AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 41100 - Farm Management Credits: 4.00
- AGEC 41200 - Farm Business Management Workshop Credits: 1.00 to 3.00
- AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00
- AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
- AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
- AGEC 45500 - Agricultural Law Credits: 3.00
- MGMT 45500 - Legal Background For Business I Credits: 3.00

Production Management Selective (3 credits)

- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 37500 - Crop Production Systems Credits: 3.00
- AGRY 50500 - Forage Management Credits: 3.00
- ASM 20100 - Construction And Maintenance Credits: 3.00
- ASM 22200 - Crop Production Equipment Credits: 3.00
- ASM 24500 - Materials Handling And Processing Credits: 3.00
- ASM 33300 - Facilities Planning And Management Credits: 3.00
- ASM 42000 - Electric Power And Controls Credits: 3.00
- BTNY 30400 - Introductory Weed Science Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 52500 - Medical And Veterinary Entomology Credits: 3.00
- TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
- TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00

Department of Biochemistry

Overview

The Department of Biochemistry is a vibrant research community with widespread, multidisciplinary collaborations. We offer both undergraduate and graduate programs with emphasis on research excellence in broad areas of science. The field of biochemistry has historically focused on molecular dissection of biological molecules and cellular pathways. Our current faculty
build upon this classical approach, using cutting-edge approaches ranging from genome-wide transcriptional analyses, state-of-the-art mass spectroscopy, and x-ray crystallography in a variety of model systems including bacteria, fungi, plants and fruit flies. These approaches allow our researchers to link real world problems such as energy production and human disease prevention to defects in basic molecular processes, tackling the most pressing issues in society.

**Faculty (website)**

**Department of Biochemistry (website)**

**Contact Information**

Department of Biochemistry  
Purdue University  
Biochemistry Building  
175 South University Street  
West Lafayette, IN 47907-2063  
Phone: 765-494-1600  
Email: biochem-boilers@purdue.edu

The main office for the department is located in Room 120 of the BCHM Building.

**Graduate Information**

For Graduate Information please see Biochemistry Graduate Program Information.

**Bachelor of Science**

**Biochemistry, BS**

**About the Program**

Biochemistry, the chemistry of living things, addresses the basic materials and processes of life itself. Biochemists investigate the chemical nature of such fundamental processes as the regulation of gene expression, the hormonal control of cell proliferation and differentiation. Knowledge of the molecular underpinnings of biological materials allows us to understand life processes and solve basic biological problems.

Students in the Department of Biochemistry, historically situated in the College of Agriculture, enjoy close mentoring by faculty through smaller class sizes and academic advising. Another strength of our program is that we strongly promote hands-on research and critical thinking skills. All students in the department participate in undergraduate research supervised by a faculty member.

There is also an opportunity to complete a five-year dual degree with biological engineering following acceptance into the College of Engineering.
How to apply to Biochemistry in the College of Agriculture

Biochemistry Website

Biochemistry Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (50-54 credits)

Required Major Courses (26-29 credits)

- BCHM 10000 - Introduction To Biochemistry Credits: 2.00 (satisfies Science, Technology & Society for core)
- BCHM 22100 - Analytical Biochemistry Credits: 3.00
- BCHM 29000 - Experimental Design Seminar Credits: 2.00
- BCHM 32200 - Analytical Biochemistry II Credits: 2.00
- BCHM 36100 - Molecules Credits: 3.00
- BCHM 39000 - Professional Development Seminar Credits: 1.00
- BCHM 46200 - Metabolism Credits: 3.00
- BCHM 46500 - Biochemistry Of Life Processes Credits: 2.00
- BCHM 49000 - Undergraduate Seminar Credits: 1.00
- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 3.00 (Capstone)
- Bioinformatics Selective - Credit Hours: 2.00-3.00
- ABE 30100 - Modeling And Computational Tools In Biological Engineering Credits: 3.00
- BCHM 42100 - R For Molecular Biosciences Credits: 3.00
- BCHM 61200 - Bioinformatic Analysis Of Genome Scale Data Credits: 3.00
- BIOL 47800 - Introduction To Bioinformatics Credits: 3.00
- BIOL 56310 - Protein Bioinformatics Credits: 3.00
- CHM 57900 - Computational Chemistry Credits: 3.00
- CS 47800 - Introduction To Bioinformatics Credits: 3.00
- HORT 53000 - Introduction To Computing For Biologists Credits: 3.00
- HORT 53100 - Applied Plant Genomics Credits: 2.00
- Advanced Biochemistry Selective - Credit Hours: 2.00-4.00 note: the courses listed below cannot be used for any other requirements in the BCHM plan of study, i.e. no "double dipping."
- BCHM 42200 - Computational Genomics Credits: 3.00
- BCHM 43400 - Medical Topics In Biochemistry Credits: 3.00
- BCHM 52100 - Comparative Genomics Credits: 3.00
- BCHM 53600 - Biological And Structural Aspects Of Drug Design And Action Credits: 3.00
- BCHM 61000 - Regulation Of Eukaryotic Gene Expression Credits: 3.00
- BCHM 62000 - Protein Mass Spectrometry And Proteomics Credits: 2.00
- BIOL 42000 - Eukaryotic Cell Biology Credits: 3.00
- BIOL 51600 - Molecular Biology Of Cancer Credits: 3.00
- CHM 34800 - Bioinorganic Chemistry Credits: 3.00
- CHM 37200 - Physical Chemistry Credits: 4.00
• CHM 43800 - Introduction To Molecular Biotechnology Credits: 3.00
• MCMP 54400 - Drug Classes And Mechanisms Credits: 3.00
• PHSC 42200 - Immunology Credits: 3.00

Biochemistry Selective Courses (24-25 credits)

• Humanities or Social Science Selective - Credit Hours: 9.00
• Science Selective - Credit Hours: 6.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Other Departmental/Program Course Requirements (53-58 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11500 - Introduction To Biochemistry Academic Programs Credits: 0.50
• AGRY 32000 - Genetics Credits: 3.00 or
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00 or
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
• BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 or
• BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
• CHM 11500 - General Chemistry Credits: 4.00 (satisfies Science #1 for core) and
• CHM 11600 - General Chemistry Credits: 4.00 (satisfies Science #2 for core) or
• CHM 12901 - General Chemistry With A Biological Focus Credits: 5.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
• CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
• CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MA 16020 - Applied Calculus II Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• PHYS 22100 - General Physics Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• Economic Selective - Credit Hours: 3.00 (satisfies Human Culture: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
Electives (8-17 credits)

Supplemental List

Click here for Biochemistry Supplemental Information

Grade Requirements

Core major coursework in biochemistry is defined as CHM 115/116/255/256, BIOL 231, BCHM 361/462. Biochemistry students must earn grades of C- or better in all of their core coursework to proceed in the major.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.
Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11500 - Introduction To Biochemistry Academic Programs Credits: 0.50
- BCHM 10000 - Introduction To Biochemistry Credits: 2.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 or
- BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
- CHM 11500 - General Chemistry Credits: 4.00♦
- MA 16010 - Applied Calculus I Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00

15-17 Credits

Spring 1st Year
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
• BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
• CHM 11600 - General Chemistry Credits: 4.00 ♦
• MA 16020 - Applied Calculus II Credits: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

13-15 Credits

Fall 2nd Year

• BCHM 22100 - Analytical Biochemistry Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00 ♦
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00

15 Credits

Spring 2nd Year

• AGRY 32000 - Genetics Credits: 3.00 or
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00 or
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
• BCHM 29000 - Experimental Design Seminar Credits: 2.00
• BCHM 36100 - Molecules Credits: 3.00
• CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00 ♦
• CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
• Oral Communication Selective - Credit Hours: 3.00

16-17 Credits

Fall 3rd Year

• BCHM 32200 - Analytical Biochemistry II Credits: 2.00
• BCHM 39000 - Professional Development Seminar Credits: 1.00
• BCHM 46200 - Metabolism Credits: 3.00
• BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
• PHYS 22000 - General Physics Credits: 4.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

14 Credits

Spring 3rd Year

• BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
• PHYS 22100 - General Physics Credits: 4.00
  • Elective - Credit Hours: 3.00-4.00
  • Humanities or Social Science Selective - Credit Hours: 3.00
  • Science Selective - Credit Hours: 3.00

14-15 Credits

Fall 4th Year

• BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
  • Bioinformatics Selective - Credit Hours: 2.00-3.00
  • Economics Selective - Credit Hours: 3.00
  • Science Selective - Credit Hours: 3.00
  • Humanities or Social Science Selective - Credit Hours: 3.00
  • Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15-16 Credits

Spring 4th Year

• BCHM 46500 - Biochemistry Of Life Processes Credits: 2.00
• BCHM 49000 - Undergraduate Seminar Credits: 1.00
  • Advanced Biochemistry Selective - Credit Hours: 2.00-4.00
  • Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
  • Elective - Credit Hours: 2.00-4.00
  • Elective - Credit Hours: 0.00-5.00

12-17 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be
proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Biochemistry: Pre-Med Concentration, BS

About the Program

Biochemistry, the chemistry of living things, addresses the basic materials and processes of life itself. Biochemists investigate the chemical nature of such fundamental processes as the regulation of gene expression, the hormonal control of cell proliferation and differentiation. Knowledge of the molecular underpinnings of biological materials allows us to understand life processes and solve basic biological problems.

Students in the Department of Biochemistry, historically situated in the College of Agriculture, enjoy close mentoring by faculty through smaller class sizes and academic advising. Another strength of our program is that we strongly promote hands-on research and critical thinking skills. All students in the department participate in undergraduate research supervised by a faculty member.

There is also an opportunity to complete a five-year dual degree with biological engineering following acceptance into the College of Engineering.

How to apply to Biochemistry in the College of Agriculture

Biochemistry Website

Biochemistry Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (52-56 credits)

Required Major Courses (26-29 credits)

- BCHM 10000 - Introduction To Biochemistry Credits: 2.00 (satisfies Science, Technology & Society for core)
- BCHM 22100 - Analytical Biochemistry Credits: 3.00
- BCHM 29000 - Experimental Design Seminar Credits: 2.00
- BCHM 32200 - Analytical Biochemistry II Credits: 2.00
- BCHM 36100 - Molecules Credits: 3.00
• BCHM 39000 - Professional Development Seminar Credits: 1.00
• BCHM 46200 - Metabolism Credits: 3.00
• BCHM 46500 - Biochemistry Of Life Processes Credits: 2.00
• BCHM 49000 - Undergraduate Seminar Credits: 1.00
• BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 (Capstone) - Credit Hours: 3.00
  Bioinformatics Selective - Credit Hours: 2.00-3.00
• ABE 30100 - Modeling And Computational Tools In Biological Engineering Credits: 3.00
• BCHM 42100 - R For Molecular Biosciences Credits: 3.00
• BCHM 61200 - Bioinformatic Analysis Of Genome Scale Data Credits: 3.00
• BIOL 47800 - Introduction To Bioinformatics Credits: 3.00
• BIOL 56310 - Protein Bioinformatics Credits: 3.00
• CHM 57900 - Computational Chemistry Credits: 3.00
• CS 47800 - Introduction To Bioinformatics Credits: 3.00
• HORT 53000 - Introduction To Computing For Biologists Credits: 3.00
• HORT 53100 - Applied Plant Genomics Credits: 2.00
  Advanced Biochemistry Selective - Credit Hours: 2.00-4.00  (Note: the courses listed below cannot be used for any other requirements in the BCHM plan of study, i.e. no "double dipping")
• BCHM 42200 - Computational Genomics Credits: 3.00
• BCHM 43400 - Medical Topics In Biochemistry Credits: 3.00
• BCHM 52100 - Comparative Genomics Credits: 3.00
• BCHM 53600 - Biological And Structural Aspects Of Drug Design And Action Credits: 3.00
• BCHM 61000 - Regulation Of Eukaryotic Gene Expression Credits: 3.00
• BCHM 62000 - Protein Mass Spectrometry And Proteomics Credits: 2.00
• BIOL 42000 - Eukaryotic Cell Biology Credits: 3.00
• BIOL 51600 - Molecular Biology Of Cancer Credits: 3.00
• CHM 34800 - Bioinorganic Chemistry Credits: 3.00
• CHM 37200 - Physical Chemistry Credits: 4.00
• CHM 43800 - Introduction To Molecular Biotechnology Credits: 3.00
• MCMP 54400 - Drug Classes And Mechanisms Credits: 3.00
• PHSC 42200 - Immunology Credits: 3.00

Pre-Med Concentration Course and Selectives (26-27 credits)

• BIOL 20300 - Human Anatomy And Physiology Credits: 4.00
• BIOL 20400 - Human Anatomy And Physiology Credits: 4.00
• BIOL 39600 - Premedical Planning Seminar Credits: 0.00
• PSY 12000 - Elementary Psychology Credits: 3.00
• SOC 10000 - Introductory Sociology Credits: 3.00
  Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• Written Selective (20000+ level) - Credit Hours: 3. 00 (see Oral & Written Selective list-only use a course for Pre-Med Concentration)
• SCLA 10200 - Transformative Texts, Critical Thinking And Communication II: Modern World Credits: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Humanities or Social Science Selective - Credit Hours: 3.00

Other Departmental/Program Course Requirements (57-58 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11500 - Introduction To Biochemistry Academic Programs Credits: 0.50
• AGRY 32000 - Genetics Credits: 3.00 or
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00 or
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ‡ or
• BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ‡ or
• BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00 ‡
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
• CHM 11500 - General Chemistry Credits: 4.00 ‡ (satisfies Science #1 for core) and
• CHM 11600 - General Chemistry Credits: 4.00 ‡ (satisfies Science #2 for core) or
• CHM 12901 - General Chemistry With A Biological Focus Credits: 5.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ‡
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
• CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00 ‡
• CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MA 16020 - Applied Calculus II Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• PHYS 22100 - General Physics Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
  Economic Selective - Credit Hours: 3.00 (satisfies Human Culture: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

Electives (6-11 credits)

• Electives - Credit Hours: 6.00-11.00

Grade Requirements

Core major coursework in biochemistry is defined as CHM 115/116/255/256, BIOL 231, BCHM 361/462. Biochemistry students must earn grades of C- or better in all of their core coursework to proceed in the major.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost’s Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).
Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11500 - Introduction To Biochemistry Academic Programs Credits: 0.50
- BCHM 10000 - Introduction To Biochemistry Credits: 2.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
- BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
- CHM 11500 - General Chemistry Credits: 4.00 ♦
- MA 16010 - Applied Calculus I Credits: 3.00

12-14 Credits

Spring 1st Year

- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
- CHM 11600 - General Chemistry Credits: 4.00 ♦
- MA 16020 - Applied Calculus II Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

16-18 Credits

Fall 2nd Year

- BCHM 22100 - Analytical Biochemistry Credits: 3.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00 ♦
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
- CHM 25500 - Organic Chemistry For The Life Sciences Credits: 3.00 ♦
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory Credits: 1.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00

15 Credits

Spring 2nd Year

- AGRY 32000 - Genetics Credits: 3.00 or
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00 or
- BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
- BCHM 29000 - Experimental Design Seminar Credits: 2.00
- BCHM 36100 - Molecules Credits: 3.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
dn
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
  Oral Communication Selective - Credit Hours: 3.00
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 or
- COM 21700 - Science Writing And Presentation Credits: 3.00 or
- SCLA 10200 - Transformative Texts, Critical Thinking And Communication II: Modern World Credits: 3.00

16-17 Credits

Fall 3rd Year

- BCHM 32200 - Analytical Biochemistry II Credits: 2.00
- BCHM 39000 - Professional Development Seminar Credits: 1.00
- BCHM 46200 - Metabolism Credits: 3.00
- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
- PHYS 22000 - General Physics Credits: 4.00
- SOC 10000 - Introductory Sociology Credits: 3.00

14 Credits

Spring 3rd Year

- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
- BIOL 39600 - Premedical Planning Seminar Credits: 0.00
- PHYS 22100 - General Physics Credits: 4.00
- PSY 12000 - Elementary Psychology Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00-5.00

14-16 Credits

Fall 4th Year

- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
- BIOL 20300 - Human Anatomy And Physiology Credits: 4.00
- Bioinformatics Selective - Credit Hours: 3.00
- Economics Selective - Credit Hours: 3.00
- Written Selective (20000+ level) - Credit Hours: 3.00

14 Credits

Spring 4th Year
Biochemistry, the chemistry of living things, addresses the basic materials and processes of life itself. Biochemists investigate the chemical nature of such fundamental processes as the regulation of gene expression, the hormonal control of cell proliferation and differentiation. Knowledge of the molecular underpinnings of biological materials allows us to understand life processes and solve basic biological problems.
Students in the Department of Biochemistry, historically situated in the College of Agriculture, enjoy close mentoring by faculty through smaller class sizes and academic advising. Another strength of our program is that we strongly promote hands-on research and critical thinking skills. All students in the department participate in undergraduate research supervised by a faculty member.

There is also an opportunity to complete a five-year dual degree with biological engineering following acceptance into the College of Engineering.

How to apply to Biochemistry in the College of Agriculture

Biochemistry Website

Biochemistry Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (52-57 credits)

Required Major Courses (26-29 credits)

- BCHM 10000 - Introduction To Biochemistry Credits: 2.00 (satisfies Science, Technology & Society for core)
- BCHM 22100 - Analytical Biochemistry Credits: 3.00
- BCHM 29000 - Experimental Design Seminar Credits: 2.00
- BCHM 32200 - Analytical Biochemistry II Credits: 2.00
- BCHM 36100 - Molecules Credits: 3.00
- BCHM 39000 - Professional Development Seminar Credits: 1.00
- BCHM 46200 - Metabolism Credits: 3.00
- BCHM 46500 - Biochemistry Of Life Processes Credits: 2.00
- BCHM 49000 - Undergraduate Seminar Credits: 1.00
- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 (Capstone) - Credit Hours: 3.00
  Bioinformatics Selective - Credit Hours: 2.00-3.00
- ABE 30100 - Modeling And Computational Tools In Biological Engineering Credits: 3.00
- BCHM 42100 - R For Molecular Biosciences Credits: 3.00
- BCHM 61200 - Bioinformatic Analysis Of Genome Scale Data Credits: 3.00
- BIOL 47800 - Introduction To Bioinformatics Credits: 3.00
- BIOL 56310 - Protein Bioinformatics Credits: 3.00
- CHM 57900 - Computational Chemistry Credits: 3.00
- CS 47800 - Introduction To Bioinformatics Credits: 3.00
- HORT 53000 - Introduction To Computing For Biologists Credits: 3.00
- HORT 53100 - Applied Plant Genomics Credits: 2.00
  Advanced Biochemistry Selective - Credit Hours: 2.00-4.00 The courses listed below cannot be used for any other requirements in the BCHM plan of study, i.e. no "double dipping."
- BCHM 42200 - Computational Genomics Credits: 3.00
- BCHM 43400 - Medical Topics In Biochemistry Credits: 3.00
- BCHM 52100 - Comparative Genomics Credits: 3.00
- BCHM 53600 - Biological And Structural Aspects Of Drug Design And Action Credits: 3.00
- BCHM 61000 - Regulation Of Eukaryotic Gene Expression Credits: 3.00
- BCHM 62000 - Protein Mass Spectrometry And Proteomics Credits: 2.00
• BIOL 42000 - Eukaryotic Cell Biology Credits: 3.00
• BIOL 51600 - Molecular Biology Of Cancer Credits: 3.00
• CHM 34800 - Bioinorganic Chemistry Credits: 3.00
• CHM 37200 - Physical Chemistry Credits: 4.00
• CHM 43800 - Introduction To Molecular Biotechnology Credits: 3.00
• MCMP 54400 - Drug Classes And Mechanisms Credits: 3.00
• PHSC 42200 - Immunology Credits: 3.00

Pre-Vet Concentration Required Courses and Selectives (26-28 credits)

• VM 10200 - Careers In Veterinary Medicine Credits: 1.00
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00 or
• ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
  Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
• COM 21700 - Science Writing And Presentation Credits: 3.00
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
  Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00
• ENGL 10800 - First Year Composition Credits: 3.00
• HONR 19903 - Interdisciplinary Approaches In Writing Credits: 3.00
• SCLA 10100 - Transformative Texts, Critical Thinking And Communication I: Antiquity To Modernity Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 9.00
  Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Other Departmental/Program Course Requirements (53-58 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11500 - Introduction To Biochemistry Academic Programs Credits: 0.50
• AGRY 32000 - Genetics Credits: 3.00 or
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00 or
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
• BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
• BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00 ♦
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
• CHM 11500 - General Chemistry Credits: 4.00 ♦ (satisfies Science #1 for core) and
• CHM 11600 - General Chemistry Credits: 4.00 ♦ (satisfies Science #2 for core) or
• CHM 12901 - General Chemistry With A Biological Focus Credits: 5.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
• CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00 ♦
• CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MA 16020 - Applied Calculus II Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• PHYS 22100 - General Physics Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

Electives (5-15 credits)

Grade Requirements

Core major coursework in biochemistry is defined as CHM 115/116/255/256, BIOL 231, BCHM 361/462. Biochemistry students must earn grades of C- or better in all of their core coursework to proceed in the major.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements
University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11500 - Introduction To Biochemistry Academic Programs Credits: 0.50
- BCHM 10000 - Introduction To Biochemistry Credits: 2.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦ or
- BIOL 12100 - Biology I: Diversity, Ecology, And Behavior Credits: 2.00
- CHM 11500 - General Chemistry Credits: 4.00 ♦
- MA 16010 - Applied Calculus I Credits: 3.00

12-14 Credits
Spring 1st Year

- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- BIOL 13100 - Biology II: Development, Structure, And Function Of Organisms Credits: 3.00
- CHM 11600 - General Chemistry Credits: 4.00 ♦
- MA 16020 - Applied Calculus II Credits: 3.00
  - Written Communication Selective - Credit Hours: 3.00-4.00
- VM 10200 - Careers In Veterinary Medicine Credits: 1.00

14-16 Credits

Fall 2nd Year

- BCHM 22100 - Analytical Biochemistry Credits: 3.00
- BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00 ♦
- BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 ♦
- CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00

15 Credits

Spring 2nd Year

- AGRY 32000 - Genetics Credits: 3.00 or
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00 or
- BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
- BCHM 29000 - Experimental Design Seminar Credits: 2.00
- BCHM 36100 - Molecules Credits: 3.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00 ♦
- CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
- Oral Communication Selective - Credit Hours: 3.00

16-17 Credits

Fall 3rd Year

- BCHM 32200 - Analytical Biochemistry II Credits: 2.00
- BCHM 39000 - Professional Development Seminar Credits: 1.00
- BCHM 46200 - Metabolism Credits: 3.00
- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
- PHYS 22000 - General Physics Credits: 4.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00

14 Credits
Spring 3rd Year

- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
- PHYS 22100 - General Physics Credits: 4.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00 or
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

14-15 Credits

Fall 4th Year

- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 - Credit Hours: 1.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- Bioinformatics Selective - Credit Hours: 2.00-3.00
- Economics Selective - Credit Hours: 3.00
- Elective - Credit Hours: 2.00-4.00
- Humanities or Social Science Selective - Credit Hours: 3.00

16-17 Credits

Spring 4th Year

- BCHM 46500 - Biochemistry Of Life Processes Credits: 2.00
- BCHM 49000 - Undergraduate Seminar Credits: 1.00
- Advanced Biochemistry Selective - Credit Hours: 2.00-4.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Elective - Credit Hours: 0.00-3.00
- Elective - Credit Hours: 0.00-4.00

13-18 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course
The course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Minor

Biochemistry Minor

Requirements for the Minor (18-19 credits)

Required Courses (11-12 credits)

- BCHM 10000 - Introduction To Biochemistry Credits: 2.00
- CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
- CHM 26200 - Organic Chemistry II Credits: 3.00
- CHM 26605 - Organic Chemistry II Credits: 3.00
- PHSC 20500 - Organic Chemistry II Credits: 3.00
- BCHM 36100 - Molecules Credits: 3.00
- BCHM 56100 - General Biochemistry I Credits: 3.00
- BCHM 46200 - Metabolism Credits: 3.00
- BCHM 56200 - General Biochemistry II Credits: 3.00

Selective Courses (7 credits)

- BCHM 29000 - Experimental Design Seminar Credits: 2.00
- BCHM 32200 - Analytical Biochemistry II Credits: 2.00
- BCHM 46500 - Biochemistry Of Life Processes Credits: 2.00
- BCHM 49000 - Undergraduate Seminar Credits: 1.00
- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00 (only 3 credits can be used in the minor)
- BCHM 22100 - Analytical Biochemistry Credits: 3.00
- CHM 32100 - Analytical Chemistry I Credits: 4.00
- Other BCHM course (40000-level or higher)
Notes

- Departmental permission is not required for this minor.
- Departmental permission is required to register for the following courses: BCHM 29000, BCHM 36100, BCHM 46200, BCHM 46300, BCHM 46500, BCHM 49000 and BCHM 49800.
- All courses for the minor must be taken for a grade (pass/not-pass courses not allowed)

Disclaimer

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Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Bioinformatics Minor

The goal of the Bioinformatics minor is to increase career opportunities for our graduates and also to meet a critical need of Indiana's stakeholders. Analysis of ongoing trends in scientific publications indicates that bioinformatics is nearly as important as biochemistry as a discipline and has led to a call for inclusion of bioinformatics courses in standard curriculums related to biology (Journal of Microbiology and Biology Education, December 2015, p198-202).

In recognition of the importance and transformative potential of data-driven fields such as bioinformatics, Purdue recently created the Integrative Data Science Initiative to promote data science-enabled research and education.

Requirements for the Minor (15-16 credits)

Required Courses (12-13 credits)

- BCHM 42100 - R For Molecular Biosciences Credits: 3.00
- BCHM 42200 - Computational Genomics Credits: 3.00
- BCHM 52100 - Comparative Genomics Credits: 3.00
- CS 17700 - Programming With Multimedia Objects Credits: 4.00 or
- CS 15900 - C Programming Credits: 3.00 or
- CS 18000 - Problem Solving And Object-Oriented Programming Credits: 4.00

Bioinformatics Elective - Choose One: (2-3 credits)

- ABE 30100 - Modeling And Computational Tools In Biological Engineering Credits: 3.00
- BIOL 47800 - Introduction To Bioinformatics Credits: 3.00
- BIOL 56310 - Protein Bioinformatics Credits: 3.00
- CHM 57900 - Computational Chemistry Credits: 3.00
• CS 47800 - Introduction To Bioinformatics Credits: 3.00
• HORT 53000 - Introduction To Computing For Biologists Credits: 3.00
• HORT 53100 - Applied Plant Genomics Credits: 2.00

Notes

Pre-requisites - There are pre-req courses that need to be taken. For current pre-requisites for courses, click here.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Non-Degree

Biochemistry Supplemental Information

Science Selective (6 Credits)

• BCHM 40000-59999 (Courses may be used if not part of the required plan of study)
• BCHM 60000:69999
• BIOL 20000:20400, 28600:29400, 30100:49700, 49900:69999
• CHM 22400:24100, 28600:29400, 32100:32800, 42400:47500, 53600:69999
• CS 20000:59999
• EAPS 22000:59900
• MA 25000:59999
• MCMP 20600:59999
• STAT 41600:47900, 51200:59900
• ABE 20100 - Material And Energy Balances In Biological Engineering Credits: 4.00
• ABE 20200 - Thermodynamics In Biological Engineering Credits: 3.00
• ABE 20500 - Computations For Engineering Systems Credits: 3.00
• ABE 21000 - Thermodynamics Principles Of Engineering And Biological Systems Credits: 3.00
• ABE 22600 - Biotechnology Laboratory I Credits: 2.00
• ABE 30100 - Modeling And Computational Tools In Biological Engineering Credits: 3.00
• ABE 30300 - Physical Chemistry In Biological Engineering Credits: 3.00
• ABE 30500 - Physical Properties Of Biological Materials Credits: 3.00
• ABE 32000 - Solid Modeling, Simulation, And Analysis Credits: 3.00
• ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- ABE 33000 - Design Of Machine Components Credits: 3.00
- ABE 33600 - All Terrain Vehicle Design Credits: 3.00
- ABE 37000 - Reaction Kinetics In Biological Engineering Credits: 3.00
- ABE 51100 - Drug Development Credits: 3.00
- ABE 51200 - Good Regulatory Practices Credits: 3.00
- ABE 52200 - Ecohydrology Credits: 3.00
- ABE 53100 - Instrumentation And Data Acquisition Credits: 3.00
- ABE 56000 - Biosensors: Fundamentals And Applications Credits: 3.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 27000 - Forest Soils Credits: 3.00
- AGRY 33700 - Environmental Hydrology Credits: 3.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 34900 - Soil Ecology Credits: 3.00
- AGRY 43100 - Atmospheric Thermodynamics Credits: 3.00
- AGRY 43200 - Atmospheric Dynamics I Credits: 3.00
- AGRY 43300 - Atmospheric Dynamics II Credits: 3.00
- AGRY 44100 - Synoptic Laboratory I Credits: 1.00
- AGRY 44200 - Synoptic Laboratory II Credits: 1.00
- AGRY 44300 - Synoptic Laboratory III Credits: 1.00
- AGRY 46500 - Soil Physical Properties Credits: 3.00
- AGRY 48000 - Plant Genetics Credits: 3.00
- AGRY 51100 - Population Genetics Credits: 3.00
- AGRY 51500 - Plant Mineral Nutrition Credits: 3.00
- AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
- AGRY 53000 - Advanced Plant Genetics Credits: 3.00
- AGRY 53500 - Boundary Layer Meteorology Credits: 3.00
- AGRY 53600 - Environmental Biophysics Credits: 3.00
- AGRY 54000 - Soil Chemistry Credits: 3.00
- AGRY 54400 - Environmental Organic Chemistry Credits: 3.00
- AGRY 55500 - Soil And Plant Analysis Credits: 3.00
- AGRY 56000 - Soil Physics Credits: 3.00
- AGRY 58000 - Soil And Rhizosphere Microbiology Credits: 3.00
- ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
- ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
- ANSC 29500 - Special Topics In Animal Sciences Credits: 0.00 to 3.00
- ANSC 33000 - Physiology Of Reproduction Credits: 3.00
- ANSC 35100 - Meat Science Credits: 3.00
- ANSC 51100 - Population Genetics Credits: 3.00
- ANSC 51400 - Animal Biotechnology Credits: 3.00
- ANSC 52400 - Ruminant Nutrition And Physiology Credits: 3.00
- ANSC 52200 - Monogastric Nutrition Credits: 3.00
- ANSC 53500 - Avian Physiology Credits: 2.00
- ANSC 55500 - Animal Growth And Development Credits: 3.00
- BCHM 10100 - Introduction To Biochemistry Laboratory Credits: 1.00
- BCHM 27500 - Honors Course - Lower Division Credits: 1.00 to 4.00
- BCHM 29801 - Head Start To Introductory Biochemistry Research Credits: 0.50 or 1.00
- BCHM 49500 - Special Assignments Credits: 1.00 to 3.00
- BCHM 49800 - Research In Biochemistry Credits: 1.00 to 6.00
- BCHM 49801 - Head Start To Biochemistry Research Credits: 0.50 to 2.00
- BCHM 53600 - Biological And Structural Aspects Of Drug Design And Action Credits: 3.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- BIOL 49700 - Biology Honors Seminar Credits: 1.00
- BTNY 20700 - The Microbial World Credits: 3.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30200 - Plant Ecology Credits: 3.00
- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00
- BTNY 50400 - Advanced Weed Science Credits: 3.00
- BTNY 50500 - Advanced Biology Of Weeds Credits: 3.00
- BTNY 55000 - Biology Of Fungi Credits: 3.00
- BTNY 55200 - Molecular Approaches In Plant Biology Credits: 3.00
- BTNY 55300 - Plant Growth And Development Credits: 3.00
- BTNY 55800 - Pathogens Of Plants Credits: 3.00
- CHM 32100 - Analytical Chemistry I Credits: 4.00
- CHM 32300 - Analytical Chemistry I Honors Credits: 4.00
- CHM 34800 - Bioinorganic Chemistry Credits: 3.00
- CHM 48100 - Environmental Chemistry Credits: 3.00
- CNIT 22700 - Introduction To Bioinformatics Credits: 2.00
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
- ENTM 22810 - Forensic Investigation Credits: 4.00
- ENTM 22820 - Forensic Analysis Credits: 4.00
- ENTM 25300 - Insect Physiology And Biochemistry Credits: 4.00
- ENTM 31100 - Insect Ecology Credits: 3.00
- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- FNR 20100 - Marine Biology Credits: 3.00
- FNR 22500 - Dendrology Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 33100 - Forest Ecosystems Credits: 3.00
- FNR 35100 - Aquatic Sampling Techniques Credits: 3.00
- FNR 35300 - Natural Resources Measurement Credits: 3.00
- FNR 43400 - Tree Physiology Credits: 3.00
- FNR 44700 - Vertebrate Population Dynamics Credits: 4.00
- FNR 45300 - Fish Physiology Credits: 3.00
- FNR 45800 - Advanced Marine Biology Credits: 3.00
- FNR 45500 - Fish Ecology Credits: 3.00
- FNR 54300 - Conservation Biology I Credits: 3.00
- FS 36200 - Food Microbiology Credits: 3.00
- FS 36300 - Food Microbiology Laboratory Credits: 2.00
- FS 45300 - Food Chemistry Credits: 3.00
- FS 46700 - Food Analysis Credits: 3.00
- FS 46900 - Food Analysis Laboratory Credits: 2.00
- FS 56500 - Microbial Foodborne Pathogens Credits: 3.00
- FS 56600 - Microbial Techniques For Food Pathogens Credits: 2.00
- Department of Botany and Plant Pathology

Overview

Welcome to the Department of Botany and Plant Pathology at Purdue University.

Plants are key to all life on earth and are critical for global carbon cycles and ecosystem function. Plants also provide us with food, medicines, and many other products. The Purdue Department of Botany and Plant Pathology has been at the forefront of plant science research, teaching, and community engagement since 1887. Our department includes 35 faculty who are advancing and teaching the disciplines of plant biology, plant pathology, and weed science.

With a degree in Plant Science from Purdue's Botany and Plant Pathology department, you will gain fundamental knowledge about plant evolution and diversity, structure, function, ecology, and development. Career opportunities include environmental and conservation biology, teaching in schools and colleges, research and teaching in academia, industry research and development, managing botanic gardens, and stewardship of our natural world through private and governmental programs.

Faculty (website)

Department of Botany and Plant Pathology (website)

Contact Information

Department of Botany and Plant Pathology
Purdue University
Lilly Hall of Life Sciences
915 West State Street
West Lafayette, IN 47907-2054
Graduate Information

For Graduate Information please see Botany and Plant Pathology Graduate Program Information.

Bachelor of Science

Plant Science, BS

About the Program

This major is designed for students who are interested in the biology of plants: how they grow, develop and evolve; the interactions of plants with other organisms and their role in the environment; how to manage plants that are grown for food, fiber and fuel. Our major allows students to develop expertise in these areas, prepare for a career in fields such as biotechnology and environmental management, and move forward to advanced graduate studies.

Plant Science Website

Plant Science Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Required Major Courses (28 credits)

• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• BTNY 20700 - The Microbial World Credits: 3.00
• BTNY 20800 - Introduction To Plant Science Research Credits: 1.00
• BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00
• BTNY 30200 - Plant Ecology Credits: 3.00
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
• BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00
• BTNY 49700 - Undergraduate Seminar Credits: 1.00 (Capstone)
• BTNY 49800 - Research In Plant Science Credits: 1.00 to 3.00 (Capstone) - Credit Hours: 3.00

Other Departmental/Program Course Requirements (78.5-79.5 credits)
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>AGR 10100</td>
<td>Introduction To The College Of Agriculture And Purdue University</td>
<td>0.50</td>
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<tr>
<td>AGR 12500</td>
<td>Introduction To Plant Science</td>
<td>1.00</td>
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<tr>
<td>AGRY 32000</td>
<td>Genetics</td>
<td>3.00</td>
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<tr>
<td>AGRY 32100</td>
<td>Genetics Laboratory</td>
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<tr>
<td>BCHM 30700</td>
<td>Biochemistry</td>
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<td>CHM 25700</td>
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<td>CHM 25701</td>
<td>Organic Chemistry Laboratory</td>
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<td>HORT 30100</td>
<td>Plant Physiology</td>
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<tr>
<td>MA 16010</td>
<td>Applied Calculus I</td>
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<td>PHYS 22000</td>
<td>General Physics</td>
<td>4.00</td>
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<td>STAT 30100</td>
<td>Elementary Statistical Methods</td>
<td>3.00</td>
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<tr>
<td>STAT 50300</td>
<td>Statistical Methods For Biology</td>
<td>3.00</td>
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<tr>
<td>Economics Selective</td>
<td>- Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)</td>
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<tr>
<td>AGEC 20300</td>
<td>Introductory Microeconomics For Food And Agribusiness</td>
<td>3.00 or</td>
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<tr>
<td>AGEC 20400</td>
<td>Introduction To Resource Economics And Environmental Policy</td>
<td>3.00 or</td>
</tr>
<tr>
<td>AGEC 21700</td>
<td>Economics</td>
<td>3.00 or</td>
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<tr>
<td>ECON 21000</td>
<td>Principles Of Economics</td>
<td>3.00 or</td>
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<td>ECON 25100</td>
<td>Microeconomics</td>
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<td>ECON 25200</td>
<td>Macroeconomics</td>
<td>3.00</td>
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<tr>
<td>Plant Science Focus Selective</td>
<td>- Credit Hours: 15.00 (see Plant Science Supplemental Information)</td>
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<tr>
<td>Human Culture: Humanities Selective</td>
<td>- Credit Hours: 3.00 (satisfies Human Culture: Humanities for core)</td>
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<tr>
<td>Science, Technology, &amp; Society Selective</td>
<td>- Credit Hours: 3.00 (satisfies Science, Technology, &amp; Society for core)</td>
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<tr>
<td>Humanities or Social Science Selective</td>
<td>- Credit Hours: 3.00</td>
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<tr>
<td>Written Communication Selective</td>
<td>- Credit Hours: 3.00-4.00 (satisfies Written Communication for core)</td>
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<td>Oral Communication Selective</td>
<td>- Credit Hours: 3.00 (satisfies Oral Communication for core)</td>
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<tr>
<td>Written or Oral Communications Selective (30000+ level)</td>
<td>- Credit Hours: 3.00</td>
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</table>

**Electives (12.5-13.5 credits)**

- Elective - Credit Hours: 12.50-13.50

**Supplemental List**

For Plant Science Focus Selective list - See Plant Science Supplemental Information

**GPA Requirements**

- 2.0 GPA required for Bachelor of Science degree.

**College of Agriculture Pass/No Pass Policy**

College of Agriculture Undergraduate Pass/No Pass Policy
Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12500 - Introduction To Plant Science Credits: 1.00
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00
• MA 16010 - Applied Calculus I Credits: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

14.5-15.5 Credits

Spring 1st Year

• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• BTNY 20700 - The Microbial World Credits: 3.00
• BTNY 20800 - Introduction To Plant Science Research Credits: 1.00
• CHM 11200 - General Chemistry Credits: 3.00
• Oral Communication Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.50

15.5 Credits

Fall 2nd Year
• BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• Focus Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

14 Credits

Spring 2nd Year

• AGRY 32000 - Genetics Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00
• BTNY 30200 - Plant Ecology Credits: 3.00
• Science, Technology, & Society Selective - Credit Hours: 3.00
• Focus Selective - Credit Hours: 3.00
• Economics Selective - Credit Hours: 3.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00

16 Credits

Fall 3rd Year

• BCHM 30700 - Biochemistry Credits: 3.00
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
• BTNY 49800 - Research In Plant Science Credits: 1.00 to 3.00 (Capstone) - Credit Hours: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• Focus Selective - Credit Hours: 3.00

16 Credits

Spring 3rd Year

• BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00
• HORT 30100 - Plant Physiology Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

16 Credits

Fall 4th Year
• BTNY 49700 - Undergraduate Seminar Credits: 1.00 (Capstone)
• Focus Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Electives - Credit Hours: 5.00-6.00

12-13 Credits

Spring 4th Year

• Focus Selective - Credit Hours: 3.00
• Focus Selective (30000+ level) - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00
• Electives - Credit Hours: 3.00

15 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Minor

Plant Biology Minor

Requirements for the Minor (15 credits)

Required Courses (4 credits)

- BTNY 11000 - Introduction To Plant Science Credits: 4.00

Selective Courses (11 credits)

- BTNY 20700 - The Microbial World Credits: 3.00
- BTNY 28500 - Plants And Civilization Credits: 3.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30200 - Plant Ecology Credits: 3.00
- BTNY 30400 - Introductory Weed Science Credits: 3.00
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
- BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00
- BTNY 49800 - Research In Plant Science Credits: 1.00 to 3.00 *
- BTNY 55000 - Biology Of Fungi Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00

Notes

- Departmental permission is not required to enroll in this minor.
- *A maximum of three credits of BTNY 49800 or comparable research in the plant sciences may be applied to the minor.
- Students in the Plant Science major cannot minor in Plant Biology.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Plant Pathology Minor
Requirements for the Minor (15 credits)

Required Courses (9 credits)

- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 52500 - Intermediate Plant Pathology Credits: 3.00
- BTNY 53500 - Plant Disease Epidemiology Credits: 3.00

Selective Courses (6 credits)

- BTNY 20700 - The Microbial World Credits: 3.00
- BTNY 49800 - Research In Plant Science Credits: 1.00 to 3.00 *
- BTNY 55000 - Biology Of Fungi Credits: 3.00

Notes

- Departmental permission is not required to enroll in this minor.
- * A maximum of three credits of BTNY 49800 or comparable research in the plant sciences may be applied to the minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Weed Science Minor

Requirements for the Minor (15 credits)

A. Required Courses (6 credits)

- BTNY 30400 - Introductory Weed Science Credits: 3.00
- BTNY 50400 - Advanced Weed Science Credits: 3.00 or
- BTNY 50500 - Advanced Biology Of Weeds Credits: 3.00

B. Selectives (9 credits)
• BTNY 30200 - Plant Ecology Credits: 3.00
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
• BTNY 49800 - Research In Plant Science Credits: 1.00 to 3.00 *
• HORT 30100 - Plant Physiology Credits: 4.00

Notes

• Department permission is not required to enroll in this minor.
• *A maximum of three credits of BTNY 49800 or comparable research in the plant sciences may be applied to the minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Non-Degree

Plant Science Supplemental Information

Focus Selective (18 credits)

Up to 3 maximum credits for 20000 level courses, including BTNY 29800

• AGEC 25000 - Economic Geography Of World Food And Resources Credits: 3.00
• AGRY 25500 - Soil Science Credits: 3.00
• AGRY 27000 - Forest Soils Credits: 3.00
• AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
• ASM 23600 - Environmental Systems Management Credits: 3.00
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BTNY 28500 - Plants And Civilization Credits: 3.00
• BTNY 29800 - Research In Plant Science Credits: 1.00 to 3.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• FNR 21000 - Natural Resource Information Management Credits: 3.00
• FNR 22500 - Dendrology Credits: 3.00
• HORT 20100 - Plant Propagation Credits: 3.00
• NRES 25500 - Soil Science Credits: 3.00
PHYS 22100 - General Physics Credits: 4.00

Up to 3 credits of BTNY 498 above the required 3 credits for PLSC degree capstone can be used.

- ABE 32500 - Soil And Water Resource Engineering Credits: 4.00
- AGEC 34000 - International Economic Development Credits: 3.00
- AGEC 41000 - Agricultural Policy Credits: 3.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 34900 - Soil Ecology Credits: 3.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 45000 - Soil Conservation and Water Management Credits: 3.00
- AGRY 48000 - Plant Genetics Credits: 3.00
- AGRY 51800 - Plant Physiology And Biotechnology Research Techniques Credits: 3.00
- AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
- AGRY 53000 - Advanced Plant Genetics Credits: 3.00
- AGRY 53600 - Environmental Biophysics Credits: 3.00
- AGRY 54400 - Environmental Organic Chemistry Credits: 3.00
- AGRY 54500 - Remote Sensing Of Land Resources Credits: 3.00
- AGRY 58000 - Soil And Rhizosphere Microbiology Credits: 3.00
- BIOL 41500 - Introduction To Molecular Biology Credits: 3.00
- BIOL 41600 - Viruses And Viral Disease Credits: 3.00
- BIOL 42000 - Eukaryotic Cell Biology Credits: 3.00
- BIOL 43800 - General Microbiology Credits: 3.00
- BIOL 48100 - Eukaryotic Genetics Credits: 3.00
- BIOL 51700 - Molecular Biology: Proteins Credits: 2.00
- BIOL 55001 - Eukaryotic Molecular Biology Credits: 4.00
- BIOL 58000 - Evolution Credits: 3.00
- BIOL 58210 - Ecological Statistics Credits: 3.00
- BIOL 59500 - Special Assignments Credits: 0.00 to 18.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30400 - Introductory Weed Science Credits: 3.00
- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- BTNY 35700 - The Intoxicated Botanist - Flora Of Indiana Credits: 1.00
- BTNY 35710 - The Intoxicated Botanist - Study Abroad Credits: 3.00
- BTNY 39000 - Selected Topics In Plant Science Credits: 1.00 to 3.00
- BTNY 49800 - Research In Plant Science Credits: 1.00 to 3.00
- BTNY 50400 - Advanced Weed Science Credits: 3.00
- BTNY 50500 - Advanced Biology Of Weeds Credits: 3.00
- BTNY 52500 - Intermediate Plant Pathology Credits: 3.00
- BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
- BTNY 55000 - Biology Of Fungi Credits: 3.00
- BTNY 55200 - Molecular Approaches In Plant Biology Credits: 3.00
- BTNY 55300 - Plant Growth And Development Credits: 3.00
- BTNY 55800 - Pathogens Of Plants Credits: 3.00
- BTNY 56200 - Plant Hormone Biology Credits: 3.00
- BTNY 59000 - Special Problems Credits: 1.00 to 3.00
- BTNY 61300 - Advanced Plant Pathology Credits: 3.00
- ENTM 31100 - Insect Ecology Credits: 3.00
- ENTM 31200 - Plant-Insect Chemical Ecology Credits: 3.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 33100 - Forest Ecosystems Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- FNR 43400 - Tree Physiology Credits: 3.00
- FNR 55800 - Remote Sensing Analysis And Applications Credits: 3.00
- FNR 59800 - Topical Problems In Forestry And Natural Resources Credits: 1.00 to 3.00
- HORT 31900 - Controlled Environment Production Of Horticultural Crops Credits: 3.00
- HORT 55100 - Plant Responses To The Environment Credits: 3.00
- SFS 30100 - Agroecology Credits: 3.00
- STAT 51100 - Statistical Methods Credits: 3.00

Department of Entomology

Overview

Vision

To be a leader recognized worldwide for the solutions and discoveries generated through the application of science focused on insect biology.

Mission

Our mission is to prepare students to addresses Societal Grand Challenges through the development and application of arthropod/nematode science.

Core Values

- Encourage the highest standards of ethics and citizenship
- Operate in an open, objective, and inclusive environment
- A community of scholars committed to excellence and teamwork
- Promote the synergism that comes from interdisciplinary interactions
- Value our human capital
- Embrace and promote increased diversity
- Adopt emerging information and other technologies as tools - not final solutions
- Resolve to actively disseminate our knowledge to people of all ages

Faculty (website)

Department of Entomology (website)

Contact Information

Department of Entomology
Purdue University - Smith Hall
901 Mitch Daniels Blvd
West Lafayette, IN 47907
The main office for the department is located in Room 100 of SMTH Hall.

Graduate Information

For Graduate Information please see Entomology Graduate Program Information.

Bachelor of Science

Insect Biology, BS

About the Program

Insect Biology Majors study insects and related organisms. The program emphasizes "hands on learning" with opportunities for faculty mentored undergraduate research, field and laboratory experiences and study abroad options. Insect biologists apply knowledge and modern technology to address grand challenges including protection of human and animal health, food, and property, and natural environments. Insect biologists work as scientists, educators, technicians, consultants, and specialists in urban, agricultural, and natural environments to prevent the spread of disease, feed the world, promote biodiversity, protect the environment, solve crimes, strengthen biosecurity, and teach science. Careers are as diverse as the insects we study.

Entomology Website

Insect Biology Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (46 credits)

Required Major Courses (43 credits)

- ENTM 10100 - Insect Biology And Societal Grand Challenges Credits: 1.00
- ENTM 10200 - The Practice Of Science Credits: 2.00
- ENTM 20100 - Scientific And Technical Communication Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
- ENTM 25300 - Insect Physiology And Biochemistry Credits: 4.00
- ENTM 30100 - Experimentation And Analysis Credits: 3.00
- ENTM 31100 - Insect Ecology Credits: 3.00
- ENTM 31200 - Plant-Insect Chemical Ecology Credits: 3.00
- ENTM 33500 - Introduction To Insect Identification Credits: 4.00
- ENTM 35300 - Insecticides And Environment Credits: 3.00
- ENTM 39300 - Insect Biology Practicum Credits: 1.00
- ENTM 39310 - Insect Biology Practicum II Credits: 1.00
- ENTM 40100 - Addressing Grand Challenges Through Insect Biology Credits: 1.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00 or
- ENTM 41002 - Insects Of Agricultural Crops Credits: 1.00
- ENTM 49310 - Insect Biology Capstone Experience Credits: 2.00 or 4.00
- ENTM 49320 - Insect Biology Capstone Experience II Credits: 2.00 to 4.00
- ENTM 49390 - Insect Biology Capstone Forum Credits: 1.00

Directed Science Selective (3 credits)

- AGRY 10000-59999
- ANSC 10000-59999
- ANTH 10000-59999
- BCHM 10000-59999
- BIOL 10000-59999
- BTNY 10000-59999
- CHM 10000-59999
- EAPS 10000-59999
- ENTM 10000-59999
- FNR 10000-59999
- HORT 10000-59999
- NRES 10000-59999
- PHYS 10000-59999

Other Departmental /Program Course Requirements (53-60 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11700 - Introduction To Entomology Academic Programs Credits: 0.50
- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00 or
- CHM 11200 - General Chemistry Credits: 3.00 or
- CHM 11600 - General Chemistry Credits: 4.00
- PHYS 21400 - The Nature Of Physics Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
  - Calculus Selective - Credit Hours: 3.00-5.00 (satisfies Quantitative Reasoning for core)
- MA 16010 - Applied Calculus I Credits: 3.00
- MA 16020 - Applied Calculus II Credits: 3.00
- MA 16100 - Plane Analytic Geometry And Calculus I Credits: 5.00
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
  - Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- ECON 21000 - Principles Of Economics Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Science, Technology, & Society Selective - Credit Hours: 3.00 (satisfies Science, Technology, & Society for core)
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00–4.00 (satisfies Written Communication for core)

Electives (16-19 credits)

- Electives - Credit Hours: 16.00-19.00

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

College of Agriculture Pass/No Pass Policy

College of Agriculture Pass/No Pass Policy

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

- College of Agriculture Humanities or Social Science Selectives (30000+ level) - Credit Hours: 3.00

- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.
GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11700 - Introduction To Entomology Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00 or
• CHM 11500 - General Chemistry Credits: 4.00 ♦
• ENTM 10100 - Insect Biology And Societal Grand Challenges Credits: 1.00
• ENTM 10200 - The Practice Of Science Credits: 2.00
• Calculus Selective - Credit Hours: 3.00-5.00

14-17 Credits

Spring 1st Year

• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
• CHM 11200 - General Chemistry Credits: 3.00 or
• CHM 11600 - General Chemistry Credits: 4.00 ♦
• ENTM 20100 - Introduction To Insect Behavior Credits: 3.00
• Economics Selective - Credit Hours: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

16-18 Credits

Fall 2nd Year

• ENTM 20100 - Scientific And Technical Communication Credits: 3.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• PHYS 21400 - The Nature Of Physics Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
• Human Cultures: Humanities Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

• ENTM 31100 - Insect Ecology Credits: 3.00
• ENTM 25300 - Insect Physiology And Biochemistry Credits: 4.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

16 Credits

Fall 3rd Year

• AGRY 32000 - Genetics Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00
• ENTM 30100 - Experimentation And Analysis Credits: 3.00
• ENTM 33500 - Introduction To Insect Identification Credits: 4.00
• ENTM 39300 - Insect Biology Practicum Credits: 1.00
Science, Technology, & Society Selective - Credit Hours: 1.00-3.00

13-15 Credits

Spring 3rd Year

- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- ENTM 31200 - Plant-Insect Chemical Ecology Credits: 3.00
- ENTM 35300 - Insecticides And Environment Credits: 3.00
- ENTM 39310 - Insect Biology Practicum II Credits: 1.00
- Directed Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 2.00-3.00

15-16 Credits

Fall 4th Year

- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 49310 - Insect Biology Capstone Experience Credits: 2.00 or 4.00 - Credit Hours: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00 or
- ENTM 41002 - Insects Of Agricultural Crops Credits: 1.00
- Elective - Credit Hours: 4.00
- Elective - Credit Hours: 3.00-4.00

12-13 Credits

Spring 4th Year

- ENTM 40100 - Addressing Grand Challenges Through Insect Biology Credits: 1.00
- ENTM 49320 - Insect Biology Capstone Experience II Credits: 2.00 to 4.00 - Credit Hours: 2.00
- ENTM 49390 - Insect Biology Capstone Forum Credits: 1.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Elective - Credit Hours: 2.00-4.00
- Elective - Credit Hours: 0.00-3.00

12-17 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses
World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS-Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Minor

Forensic Sciences Minor

Requirements for the Minor (20 credits)

Required Courses (11 credits)

- ENTM 22810 - Forensic Investigation Credits: 4.00
- ENTM 22820 - Forensic Analysis Credits: 4.00
- ENTM 22830 - Forensic Testimony And Ethics Credits: 3.00

Selective Courses (9 credits)

- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 34900 - Soil Ecology Credits: 3.00
- AGRY 35500 - Soil Morphology And Geography Credits: 2.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 58000 - Soil And Rhizosphere Microbiology Credits: 3.00
- ANTH 31000 - Mortuary Practices Across Cultures Credits: 3.00
- ANTH 33600 - Human Variation Credits: 3.00
• PSY 33500 - Stereotyping And Prejudice Credits: 3.00
• PSY 35000 - Abnormal Psychology Credits: 3.00
• PSY 42800 - Drugs And Behavior Credits: 3.00
• PSY 44300 - Aggression And Violence Credits: 3.00
• SOC 32400 - Criminology Credits: 3.00
• SOC 32700 - Crime, Deviance And Mass Media Credits: 3.00
• SOC 32800 - Criminal Justice Credits: 3.00
• SOC 35600 - Hate And Violence Credits: 3.00
• SOC 41900 - Sociology Of Law Credits: 3.00
• SOC 42600 - Social Deviance And Control Credits: 3.00
• AGRY 25500 - Soil Science Credits: 3.00 or
• AGRY 27000 - Forest Soils Credits: 3.00
• BCHM 30700 - Biochemistry Credits: 3.00 or
• CHM 33300 - Principles Of Biochemistry Credits: 3.00 or
• CHM 33900 - Biochemistry: A Molecular Approach Credits: 3.00
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00 or
• CHM 33901 - Biochemistry Laboratory Credits: 1.00
• BCHM 56100 - General Biochemistry I Credits: 3.00 or
• CHM 53300 - Introductory Biochemistry Credits: 3.00
• BIOL 20300 - Human Anatomy And Physiology Credits: 4.00 or
• BIOL 20400 - Human Anatomy And Physiology Credits: 4.00 or
• CHM 32100 - Analytical Chemistry I Credits: 4.00 or
• CHM 22400 - Introductory Quantitative Analysis Credits: 4.00 or
• CHM 32300 - Analytical Chemistry I Honors Credits: 4.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 or
• CHM 25700 - Organic Chemistry Credits: 4.00 or
• CHM 26505 - Organic Chemistry I Credits: 3.00
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00 or
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00 or
• CHM 26500 - Organic Chemistry Laboratory I Credits: 2.00 or
• CHM 26700 - Organic Chemistry Laboratory I Honors Credits: 2.00
• PHYS 21800 - General Physics Credits: 4.00 or
• PHYS 17200 - Modern Mechanics Credits: 4.00 or
• PHYS 22000 - General Physics Credits: 4.00 or
• PHYS 23300 - Physics For Life Sciences I Credits: 4.00
• PHYS 21900 - General Physics II Credits: 4.00 or
• PHYS 22100 - General Physics Credits: 4.00 or
• PHYS 23400 - Physics For Life Sciences II Credits: 4.00

Notes

• Departmental permission is not required to enroll in this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Disclaimer
Insect Biology Minor

Requirements for the Minor (15 credits)

Required Courses (3 credits)

- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00

Selective Courses (12 credits)

- ENTM 10500 - Insects: Friend And Foe Credits: 3.00
- ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
- ENTM 25300 - Insect Physiology And Biochemistry Credits: 4.00
- ENTM 31100 - Insect Ecology Credits: 3.00
- ENTM 31200 - Plant-Insect Chemical Ecology Credits: 3.00
- ENTM 32820 - Medico-Legal Entomology Credits: 3.00
- ENTM 33500 - Introduction To Insect Identification Credits: 4.00
- ENTM 35300 - Insecticides And Environment Credits: 3.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
- ENTM 52500 - Medical And Veterinary Entomology Credits: 3.00

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Non-Degree
Insect Biology Supplemental Information

Directed Science Selective (3 credits)

- AGRY 48000 - Plant Genetics Credits: 3.00
- AGRY 51100 - Population Genetics Credits: 3.00
- AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
- ANSC 51100 - Population Genetics Credits: 3.00
- ANSC 51400 - Animal Biotechnology Credits: 3.00
- BCHM 22100 - Analytical Biochemistry Credits: 3.00
- BCHM 36100 - Molecules Credits: 3.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- BIOL 48100 - Eukaryotic Genetics Credits: 3.00
- BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00
- CHM 22400 - Introductory Quantitative Analysis Credits: 4.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- ENTM 32810 - Practical Molecular Biology Credits: 3.00
- PHYS 22100 - General Physics Credits: 4.00

Department of Food Science

Overview

The Department of Food Science at Purdue University is committed to impacting the world food system and quality of life by educating and training undergraduate and graduate students for careers in industry, government, and academia. Our mission is to expand and transfer knowledge for continuous improvement of the safety, quality, value, and security of the world's food supply through basic research and outreach programs.

Our faculty, staff, and students are located on Purdue University's main campus in the Philip E. Nelson Hall of Food Science, 745 Agriculture Mall Drive, West Lafayette, Indiana 47907. This building provides excellent research laboratories, as well as specialized facilities such as the sensory evaluation laboratory, pilot scale-manufacturing plant, student product development and innovation laboratory, and enology library for us to engage with the food and beverage industry and government partners.

Faculty (website)

Department of Food Science (website)

Contact Information

Department of Food Science
The field of Fermentation Science integrates scientific disciplines, such as microbiology and biochemistry, with process engineering to discover ways to use microbes as biotechnological factories to produce goods of societal value, from foods to biofuels to pharmaceuticals. A fermentation scientist possesses the skills necessary to engineer microbes to convert diverse feedstocks into value-added products, design and operate fermentation processes, and recover and refine the synthesized products. Graduates apply scientific knowledge and economic principles to biotechnology and fermentation operation, research, development, and marketing or pursue graduate studies in biotechnology, applied microbiology, or biological engineering.

Degree Requirements

120 Credits Required

Required Major Courses (33 credits)
• FS 34100 - Food Processing I Credits: 2.00
• FS 36100 - Food Plant Sanitation Credits: 1.00
• FS 36200 - Food Microbiology Credits: 3.00
  ♦ or
• BIOL 43800 - General Microbiology Credits: 3.00 ♦
• FS 36300 - Food Microbiology Laboratory Credits: 2.00
  ♦ or
• BIOL 43900 - Laboratory In General Microbiology Credits: 2.00 ♦
• FS 37200 - Fermentation Microbiology Credits: 3.00
• FS 37300 - Fermentation Microbiology Laboratory Credits: 1.00
• FS 40100 - Fermentation Processing Credits: 2.00
• FS 40200 - Fermentation Processing Laboratory Credits: 1.00
• FS 44400 - Statistical Process Control Credits: 1.00
• FS 48200 - Food Science Senior Seminar Credits: 1.00
• FS 48300 - Fermentation Capstone Credits: 3.00
• Fermentation Products Selective - Credit Hours: 1.00
• General Fermentation Selectives - Credit Hours: 5.00

Other Departmental /Program Course Requirements (80-81 credits)

• ABE 22600 - Biotechnology Laboratory I Credits: 2.00 ♦
• ABE 32700 - Biotechnology Laboratory II Credits: 2.00 ♦
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11800 - Introduction To Food Science Academic Programs Credits: 0.50
• BCHM 30700 - Biochemistry Credits: 3.00 ♦
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
• BIOL 23100 - Biology Ill: Cell Structure And Function Credits: 3.00 ♦
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00 ♦
• CHM 11500 - General Chemistry Credits: 4.00 ♦ (satisfies Science for core)
• CHM 11600 - General Chemistry Credits: 4.00 ♦ (satisfies Science for core)
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• CHM 32100 - Analytical Chemistry I Credits: 4.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
• MA 16020 - Applied Calculus II Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00 ♦
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
• Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00
• Professional Communications Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00 - 4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ Level) - Credit Hours: 3.00

Electives (6-7 credits)

• Electives - Credit Hours: 6.00 - 7.00

Additional Requirements

Food Science Department Supplemental Information

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.
Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Program Requirements

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11800 - Introduction To Food Science Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- CHM 11500 - General Chemistry Credits: 4.00 ♦
- FS 16100 - Science Of Food Credits: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00

15 Credits

Spring 1st Year

- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- CHM 11600 - General Chemistry Credits: 4.00 ♦
• FS 16300 - Introduction To Fermentation Sciences Credits: 3.00
• MA 16020 - Applied Calculus II Credits: 3.00
• Elective - Credit Hours: 2.00

16 Credits

Fall 2nd Year

• ABE 22600 - Biotechnology Laboratory I Credits: 2.00 ♦
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00 ♦
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• FS 29800 - Sophomore Seminar Credits: 1.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00

14 Credits

Spring 2nd Year

• BCHM 30700 - Biochemistry Credits: 3.00 ♦
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00 ♦
• Economics Selective - Credit Hours: 3.00 ♦
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00 or
• Oral Communication Selective - Credit Hours: 3.00
• Written Communication Selective - Credit Hours: 3.00 - 4.00

16-17 Credits

Fall 3rd Year

• FS 36100 - Food Plant Sanitation Credits: 1.00
• FS 36200 - Food Microbiology Credits: 3.00 ♦ or
• BIOL 43800 - General Microbiology Credits: 3.00 ♦
• FS 36300 - Food Microbiology Laboratory Credits: 2.00 ♦ or
• BIOL 43900 - Laboratory In General Microbiology Credits: 2.00 ♦
• General Fermentation Selective - Credit Hours - 2.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Humanities or Social Sciences Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00

15 Credits
Spring 3rd Year

- ABE 32700 - Biotechnology Laboratory II **Credits: 2.00**
- FS 37200 - Fermentation Microbiology **Credits: 3.00**
- FS 37300 - Fermentation Microbiology Laboratory **Credits: 1.00**
- Written or Oral Communication Selective (20000+ Level) - **Credit Hours: 3.00**
- PHYS 22000 - General Physics **Credits: 4.00**
- Fermentation Products Selective - **Credit Hours: 1.00**

14 Credits

Fall 4th Year

- CHM 32100 - Analytical Chemistry I **Credits: 4.00**
- FS 34100 - Food Processing I **Credits: 2.00**
- FS 40100 - Fermentation Processing **Credits: 2.00**
- FS 40200 - Fermentation Processing Laboratory **Credits: 1.00**
- FS 44400 - Statistical Process Control **Credits: 1.00**
- FS 48200 - Food Science Senior Seminar **Credits: 1.00**
- Professional Communication Selective - **Credit Hours: 3.00**
- Elective - **Credit Hours: 1.00**

15 Credits

Spring 4th Year

- FS 48300 - Fermentation Capstone **Credits: 3.00**
- Fermentation Selective - **Credit Hours: 3.00**
- Humanities or Social Sciences Selective - **Credit Hours: 3.00**
- Humanities or Social Sciences Selective (30000+) - **Credit Hours: 3.00**
- Elective - **Credit Hours: 2.00 - 3.00**

14-15 Credits

Notes

- 2.0 GPA required for Bachelor of Science degree.
- Minimum GPA of 2.50 in FS core classes.
- Students must meet a minimum GPA $\geq 2.50$ in math and science courses to enroll in upper division FS courses.
- Consultation with an advisor may result in an altered plan customized for an individual student.

Pre-Requisite Information
World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Food Science, BS

About the Program

The field of Food Science applies science, such as microbiology and biochemistry, to discover ways to improve the taste, nutrition, and value of the food supply. A food scientist possesses the skills necessary to convert raw food products into safe, attractive foods and beverages. Graduates apply scientific knowledge and economic principles to food production, storage, distribution, product development, quality control, inspection, and sales, or they pursue graduate studies in food processing, microbiology, or chemistry.

Food Science Website

Food Science Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (37 credits)
Required Major Courses (37 credits)

- FS 16100 - Science Of Food Credits: 3.00 (satisfies Science, Technology and Society for core)
- FS 24500 - Food Packaging Credits: 1.00
- FS 29800 - Sophomore Seminar Credits: 1.00
- FS 34000 - Introduction To Food Law And Regulations Credits: 1.00
- FS 34100 - Food Processing I Credits: 2.00
- FS 34200 - Food Processing I Laboratory Credits: 1.00
- FS 36100 - Food Plant Sanitation Credits: 1.00
- FS 36200 - Food Microbiology Credits: 3.00
- FS 36300 - Food Microbiology Laboratory Credits: 2.00
- FS 43500 - Sensory Science Credits: 1.00
- FS 44200 - Food Processing II Credits: 2.00
- FS 44300 - Food Product Design (Capstone) Credits: 3.00
- FS 44400 - Statistical Process Control Credits: 1.00
- FS 44700 - Food Processing II Laboratory Credits: 1.00
- FS 45300 - Food Chemistry Credits: 3.00
- FS 45400 - Food Chemistry Laboratory Credits: 1.00
- FS 46700 - Food Analysis Credits: 3.00
- FS 46900 - Food Analysis Laboratory Credits: 2.00
- FS 48200 - Food Science Senior Seminar Credits: 1.00
- FS 53000 - Food Ingredient Technology Credits: 1.00
- NUTR 31500 - Fundamentals Of Nutrition Credits: 3.00

Other Departmental/Program Course Requirements (70-71 credits)

Course Requirements (67-68 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11800 - Introduction To Food Science Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00
- BIOL 22100 - Introduction To Microbiology Credits: 4.00
- CHM 11500 - General Chemistry Credits: 4.00 (satisfies Science #1 for core)
- CHM 11600 - General Chemistry Credits: 4.00 (satisfies Science #2 for core)
- CHM 25700 - Organic Chemistry Credits: 4.00
- CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
- BCHM 30700 - Biochemistry Credits: 3.00
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- MA 16020 - Applied Calculus II Credits: 3.00
- PHYS 22000 - General Physics Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- ECON 21000 - Principles Of Economics Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ Level) - Credit Hours: 3.00

Professional Communications Selective (3 credits)

• COM 21000 - Addressing Public Issues Credits: 3.00
• COM 22400 - Communicating In The Global Workplace Credits: 3.00
• COM 25200 - Writing For Mass Media Credits: 3.00
• COM 31400 - Advanced Presentational Speaking Credits: 3.00
• COM 31500 - Speech Communication Of Technical Information Credits: 3.00
• COM 32000 - Small Group Communication Credits: 3.00
• COM 32500 - Interviewing: Principles And Practice Credits: 3.00
• COM 37400 - Social Interaction Skills: Assessment And Development Credits: 3.00
• COM 41500 - Discussion Of Technical Problems Credits: 3.00
• ENGL 30400 - Advanced Composition Credits: 3.00
• ENGL 41900 - Multimedia Writing Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00
• ENGL 43300 - Writing Proposals And Grants Credits: 3.00
• NUTR 42400 - Communication Techniques In Foods And Nutrition Credits: 3.00

Electives (12-13 credits)
• Electives - Credit Hours: 12.00-13.00

GPA Requirements
• 2.0 GPA required for Bachelor of Science degree.
• Minimum GPA of 2.50 in FS core classes and NUTR 31500 is required for graduation
• Students must meet a minimum GPA $\geq$ 2.50 in math and science courses to enroll in upper division FS courses.

College of Agriculture & University Level Requirements
• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).
Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11800 - Introduction To Food Science Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- CHM 11500 - General Chemistry Credits: 4.00 ♦
- FS 16100 - Science Of Food Credits: 3.00
- MA 16010 - Applied Calculus I Credits: 3.00

15 Credits

Spring 1st Year

- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦
- CHM 11600 - General Chemistry Credits: 4.00 ♦
- MA 16020 - Applied Calculus II Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00
- Elective - Credit Hours: 2.00

16-17 Credits

Fall 2nd Year

- BIOL 22100 - Introduction To Microbiology Credits: 4.00 ♦
- CHM 25700 - Organic Chemistry Credits: 4.00 ♦
- CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
- FS 29800 - Sophomore Seminar Credits: 1.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Spring 2nd Year

- BCHM 30700 - Biochemistry Credits: 3.00 ♦
- BCHM 30900 - Biochemistry Laboratory Credits: 1.00
- FS 24500 - Food Packaging Credits: 1.00
• PHYS 22000 - General Physics Credits: 4.00
• Elective - Credit Hours: 3.00
  Economics Selective - Credit Hours: 3.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00

15 Credits

Fall 3rd Year

• FS 34100 - Food Processing I Credits: 2.00
• FS 34200 - Food Processing I Laboratory Credits: 1.00
• FS 36100 - Food Plant Sanitation Credits: 1.00
• FS 36200 - Food Microbiology Credits: 3.00
• FS 36300 - Food Microbiology Laboratory Credits: 2.00
• NUTR 31500 - Fundamentals Of Nutrition Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Elective - Credit Hours: 2.00

17 Credits

Spring 3rd Year

• FS 45300 - Food Chemistry Credits: 3.00
• FS 45400 - Food Chemistry Laboratory Credits: 1.00
• FS 46700 - Food Analysis Credits: 3.00
• FS 46900 - Food Analysis Laboratory Credits: 2.00
• Written or Oral Communication Selective (20000+ Level) - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

15 Credits

Fall 4th Year

• FS 44200 - Food Processing II Credits: 2.00
• FS 44400 - Statistical Process Control Credits: 1.00
• FS 44700 - Food Processing II Laboratory Credits: 1.00
• FS 48200 - Food Science Senior Seminar Credits: 1.00
• FS 53000 - Food Ingredient Technology Credits: 1.00
• Professional Communication Selective - Credit Hours: 3.00
• Humanities or Social Sciences Selective - Credit Hours: 3.00

12 Credits
Spring 4th Year

- FS 34000 - Introduction To Food Law And Regulations Credits: 1.00
- FS 43500 - Sensory Science Credits: 1.00
- FS 44300 - Food Product Design (Capstone) Credits: 3.00
- Humanities or Social Sciences Selective - Credit Hours: 3.00
- Humanities or Social Sciences Selective (30000+) - Credit Hours: 3.00
- Elective - Credit Hours: 2.00-3.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREEK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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Minor

Fermentation Sciences Minor
About this Program:

The fermentation science minor enables students enrolled in the program to develop specific science-based knowledge, skills and expertise in the field of fermentation science to broaden their employment and/or entrepreneurial opportunities.

Currently, there is enormous interest in the use of microorganisms at an industrial level in fields such as the pharmaceutical, chemical, and food industries. Even though fermentation has been used since ancient times as a method for food preservation, the industrial potential for sustainable production of many types of bio-based materials (ranging from foods and beverages, to biofuels, bioplastics, biopharmaceuticals, and fine chemicals) is only beginning to be explored.

Requirements for the Minor (18 credits)

Required Courses (3 credits)

- FS 16300 - Introduction To Fermentation Sciences Credits: 3.00

Minor Selectives - Choose Two (6 credits)

- BCHM 30700 - Biochemistry Credits: 3.00 or
- BCHM 46200 - Metabolism Credits: 3.00 or
- BCHM 56100 - General Biochemistry I Credits: 3.00 or
- BIOL 22100 - Introduction To Microbiology Credits: 4.00 or
- BIOL 43800 - General Microbiology Credits: 3.00

Additional Courses (9 credits)

- ABE 22600 - Biotechnology Laboratory I Credits: 2.00
- ABE 30400 - Biological Engineering Laboratory Credits: 3.00
- ABE 32700 - Biotechnology Laboratory II Credits: 2.00
- ABE 58000 - Advanced Processes In Biological Engineering Credits: 3.00
- ABE 59100 - Special Topics Credits: 0.00 to 4.00 - Title: Principles of Systems and Synthetic Biology (3 credits)
- ANTH 25600 - Archaeology Of Beer Credits: 3.00
- FS 37200 - Fermentation Microbiology Credits: 3.00
- FS 37300 - Fermentation Microbiology Laboratory Credits: 1.00
- FS 38100 - Industrial Fermentation Products Credits: 1.00
- FS 38300 - Fermented Beverage Products Credits: 1.00
- FS 40100 - Fermentation Processing Credits: 2.00
- FS 40200 - Fermentation Processing Laboratory Credits: 1.00
- FS 47000 - Wine Appreciation Credits: 3.00
- FS 49100 - Special Assignments In Food Science Credits: 1.00 to 3.00 - Titles: Dairy Products (1 credit); Anaerobic Microbial Physiology (3 credits); Crucial Metabolic Pathways in Food Fermentation (1 credit)
- FS 59100 - Special Topics Credits: 1.00 to 3.00 - Title: Commercial Food and Beverage Fermentations Lab (1 credit)
- GER 28000 - German Special Topics Credits: 3.00 - Title: Beer & Brewing in Germany (3 credits)
- HORT 50600 - Commercial Grape And Wine Production Credits: 3.00

Pre-Requisite Information
Food Science Minor

Requirements for the Minor (18 credits)

Required Courses (11 credits)

- FS 16100 - Science Of Food Credits: 3.00
- FS 34100 - Food Processing I Credits: 2.00
- FS 36200 - Food Microbiology Credits: 3.00
- FS 45300 - Food Chemistry Credits: 3.00

Selective Courses (7 credits)

- ANSC 35100 - Meat Science Credits: 3.00
- ANSC 35101 - Meat Science Laboratory Credits: 1.00
- NUTR 31500 - Fundamentals Of Nutrition Credits: 3.00
- FS 10000-59999* - All Food Sciences courses - Credit Hours: 3.00

Notes

- Department permission is not required to enroll in this minor.
- * Maximum of 3 credits of independent study (FS 29100 or FS 49100).

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.
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**Pet Food Processing Minor**

**Requirements for the Minor (21 credits)**

**Required Courses (21 credits)**

- ANSC 10600 - Biology Companion Animal **Credits**: 3.00 *
- ANSC 32400 - Applied Animal Nutrition **Credits**: 3.00
- ANSC 44600 - Companion Animal Management **Credits**: 3.00
- FS 16100 - Science Of Food **Credits**: 3.00
- FS 34100 - Food Processing I **Credits**: 2.00
- FS 34200 - Food Processing I Laboratory **Credits**: 1.00
- FS 36200 - Food Microbiology **Credits**: 3.00
- FS 44200 - Food Processing II **Credits**: 2.00
- FS 44700 - Food Processing II Laboratory **Credits**: 1.00

**Notes**

- Department permission is not required to enroll in this minor.
- * (3) ANSC 10200 (Introduction to Animal Agriculture) can be substituted for ANSC 10600, but ANSC 10600 is preferred for this minor.

**Pre-Requisite Information**

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

**Disclaimer**

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Non-Degree**

**Food Science Department Supplemental Information**

Professional Communications Selective (3 credits)
• COM 21000 - Addressing Public Issues Credits: 3.00
• COM 22400 - Communicating In The Global Workplace Credits: 3.00
• COM 25200 - Writing For Mass Media Credits: 3.00
• COM 31400 - Advanced Presentational Speaking Credits: 3.00
• COM 31500 - Speech Communication Of Technical Information Credits: 3.00
• COM 32000 - Small Group Communication Credits: 3.00
• COM 32500 - Interviewing: Principles And Practice Credits: 3.00
• COM 37400 - Social Interaction Skills: Assessment And Development Credits: 3.00
• COM 41500 - Discussion Of Technical Problems Credits: 3.00
• ENGL 30400 - Advanced Composition Credits: 3.00
• ENGL 41900 - Multimedia Writing Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00
• ENGL 43300 - Writing Proposals And Grants Credits: 3.00
• NUTR 42400 - Communication Techniques In Foods And Nutrition Credits: 3.00

General Fermentation Selective for Fermentation Science (5 credits)

• ABE 37000 - Reaction Kinetics In Biological Engineering Credits: 3.00
• ABE 44000 - Cell And Molecular Modeling In Biological Engineering Credits: 3.00
• ABE 30400 - Biological Engineering Laboratory Credits: 3.00
• ABE 55800 - Biological Engineering Design II Credits: 3.00
• ABE 58000 - Advanced Processes In Biological Engineering Credits: 3.00
• ABE 59100 - Special Topics Credits: 0.00 to 4.00 (Title: Principles of Systems and Synthetic Biology)
• ABE 51100 - Drug Development Credits: 3.00
• ABE 51200 - Good Regulatory Practices Credits: 3.00
• ANTH 25600 - Archaeology Of Beer Credits: 3.00
• FS 45300 - Food Chemistry Credits: 3.00
• FS 45400 - Food Chemistry Laboratory Credits: 1.00
• FS 46700 - Food Analysis Credits: 3.00
• FS 46900 - Food Analysis Laboratory Credits: 2.00
• FS 47000 - Wine Appreciation Credits: 3.00
• FS 59100 - Special Topics Credits: 1.00 to 3.00 (Title: Microbial Genomics and Metabolism)
• GER 28000 - German Special Topics Credits: 3.00 (Title: Beer and Brewing in Germany)
• IMPH 56200 - Introduction To Pharmaceutical Manufacturing Processes Credits: 4.00

Fermentation Products Selective (1 credit)

• FS 38000 - Fermented Food Products Credits: 1.00
• FS 38100 - Industrial Fermentation Products Credits: 1.00
• FS 38300 - Fermented Beverage Products Credits: 1.00

- Department of Forestry and Natural Resources

Overview
Welcome to the Department of Forestry and Natural Resources (FNR)! As one of the nation's elite programs in ecology and evolutionary biology, it is our mission to develop and disseminate knowledge associated with the protection, management, and sustainable use of terrestrial and aquatic ecosystems. FNR is training the next generation of professionals in the natural resource sciences, which includes aquatic science, forestry and wildlife.

Faculty (website)

Department of Forestry and Natural Resources (FNR) (website)

Contact Information

The Department of Forestry and Natural Resources

Purdue University

Pfendler Hall
715 West State Street
West Lafayette IN 47907-2061

Phone: 765-494-3591

Email: joinfnr@purdue.edu

The main office for the department is located in Room 125 in PFEN Hall.

Current Undergraduate Students (website)

Future Undergraduate Students (website)

Graduate Information

For Graduate Information please see Forestry and Natural Resources Graduate Program Information.

Bachelor of Science

Aquatic Sciences: Fisheries Concentration, BS

About the Program

The Fisheries concentration will provide students with applied training relevant to fisheries science and management fields. This concentration builds on traditional fisheries programs by offering course in Fish Population Dynamics and Practical Fisheries Management. The Fisheries concentration is developed such that when a student completes the major/concentration she/he would have completed all coursework necessary to qualify as a Certified Fisheries Professional through the American Fisheries Society.
Degree Requirements

120 Credits Required

Departmental/Program Major Courses (67-68 credits)

Required Major Courses (56-57 credits)

- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- FNR 20100 - Marine Biology Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00 ♦
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
- FNR 27000 - Landscape-Level Planning Credits: 1.00
- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 35110 - Aquatic Sampling Techniques I Credits: 2.00
- FNR 35150 - Aquatic Sampling Techniques II Credits: 2.00
- FNR 37010 - Natural Resources Practicum Credits: 1.00
- FNR 37100 - Fisheries And Aquatic Sciences Practicum Credits: 5.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
- FNR 38400 - Statistics For Natural Resources Credits: 3.00
- FNR 38500 - Fish Biology And Ecology Credits: 4.00
- FNR 40100 - Limnology Credits: 3.00
- FNR 45600 - Fish And Marine Population Dynamics Credits: 4.00
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- FNR 52700 - Ecotoxicology Credits: 2.00 or
- FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00 or
- FNR 52900 - Disease Ecology Credits: 3.00

Required Concentration Courses (11 credits)

- FNR 45200 - Aquaculture Credits: 3.00
- FNR 45700 - Practical Fisheries Management Credits: 2.00 (Capstone)

Aquatics Selective (6 credits)

- AGRY 33700 - Environmental Hydrology Credits: 3.00
- FNR 31300 - Aquaponics Credits: 1.00
- FNR 35910 - Spatial Ecology Credits: 2.00
- FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
- FNR 37800 - Marine Biology Practicum Credits: 3.00
- FNR 45300 - Fish Physiology Credits: 3.00
- FNR 45800 - Advanced Marine Biology Credits: 3.00
• FNR 52700 - Ecotoxicology Credits: 2.00
• FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00
• FNR 52900 - Disease Ecology Credits: 3.00
• FNR 54300 - Conservation Biology I Credits: 3.00

Other Departmental/Program Course Requirements (50-53 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00 ♦
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
• AGRY 25500 - Soil Science Credits: 3.00 or
• AGRY 27000 - Forest Soils Credits: 3.00
  Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
• AEGC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AEGC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00
  Ethics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• PHIL 11100 - Introduction To Ethics Credits: 3.00 or
• PHIL 28000 - Ethics And Animals Credits: 3.00 or
• PHIL 29000 - Environmental Ethics Credits: 3.00
  Physical Science Selective - Credit Hours: 3.00-4.00 **
• AGRY 33700 - Environmental Hydrology Credits: 3.00 or
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 or
• EAPS 10400 - Oceanography Credits: 3.00 or
• PHYS 22000 - General Physics Credits: 4.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (0-4 credits)

• Electives - Credit Hours: 2.00-3.00

Course Requirements and Notes

• ** Physical Science Selective: Other courses in astronomy, chemistry, earth science, geology, hydrology, meteorology, physics, and soil science, if acceptable for the American Fisheries Society "Certified Fisheries Professional" certification. Contact your academic advisor for approval.

College of Agriculture & University Level Requirements
• College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

**College of Agriculture Pass/No Pass Policy**

College of Agriculture Undergraduate Pass/No Pass Policy

**Transfer Credit Policy**

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

**GPA Requirements**

• 2.0 GPA required for Bachelor of Science degree.

**University Requirements**

**University Core Requirements**

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)

• Human Cultures: Humanities (HUM)

• Information Literacy (IL)

• Oral Communication (OC)

• Quantitative Reasoning (QR)

• Science #1 (SCI)

• Science #2 (SCI)

• Science, Technology, and Society (STS)

• Written Communication (WC)

**Civics Literacy Proficiency Requirement**

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:
• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (3000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
• BIOL 11000 - Fundamentals Of Biology I Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

MA 16010 - Applied Calculus I Credits: 3.00 or
MA 16500 - Analytic Geometry And Calculus I Credits: 4.00

14-16 Credits

Spring 1st Year

• BTNY 11000 - Introduction To Plant Science Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00
• FNR 12500 - Environmental Science And Conservation Credits: 3.00
• FNR 20100 - Marine Biology Credits: 3.00
• Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

• FNR 23000 - The World's Forests And Society Credits: 3.00
• FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
• FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00
• FNR 27000 - Landscape-Level Planning Credits: 1.00
• FNR 35110 - Aquatic Sampling Techniques I Credits: 2.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
• Microeconomics Selective - Credit Hours: 3.00

16 Credits

Spring 2nd Year

• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00 ♦
• FNR 21000 - Natural Resource Information Management Credits: 3.00 ♦
• FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
• FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
• FNR 35150 - Aquatic Sampling Techniques II Credits: 2.00
• AGRY 25500 - Soil Science Credits: 3.00 or
• AGRY 27000 - Forest Soils Credits: 3.00

14 Credits

Summer Session

• FNR 37010 - Natural Resources Practicum Credits: 1.00
• FNR 37100 - Fisheries And Aquatic Sciences Practicum Credits: 5.00

6 Credits

Fall 3rd Year

• FNR 40100 - Limnology Credits: 3.00
• FNR 45600 - Fish And Marine Population Dynamics Credits: 4.00
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• Aquatics Selective - Credit Hours: 3.00

13 Credits

Spring 3rd Year

• FNR 30500 - Conservation Genetics Credits: 3.00
• FNR 38400 - Statistics For Natural Resources Credits: 3.00
• FNR 38500 - Fish Biology And Ecology Credits: 4.00
• Humanities or Social Science Selective - Credit Hours: 3.00

13 Credits

Fall 4th Year
• FNR 45700 - Practical Fisheries Management Credits: 2.00
• FNR 52700 - Ecotoxicology Credits: 2.00 or
• FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00 or
• FNR 52900 - Disease Ecology Credits: 3.00
• Aquatics Sciences Major Selective - Credit Hours: 3.00
• Additional Written or Oral communication Selective - Credit Hours: 3.00
• Ethics Elective - Credit Hours: 3.00

13-14 Credits

Spring 4th Year

• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• FNR 45200 - Aquaculture Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Physical Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00-2.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Aquatic Sciences: Marine and Freshwater Biology Concentration, BS**

**About the Program**

The Marine and Freshwater Biology concentration provides education and training opportunities for students broadly interested in aquatic sciences. Marine-science-focused courses are included in this concentration in response to interest shown by a large number of Purdue students enrolled in classes such as FNR 20100 Marine Biology. These courses include a Marine Biology Practicum experience along the Gulf Coast, an Advanced Marine Biology course and a physical sciences requirement (for example, oceanography). This concentration provides students with rigorous training in the marine sciences and places Purdue among the leaders in marine science education in the Midwest. The AQSC major also offers a new course in Limnology - a critical knowledge area for marine and freshwater biologists.

**Forestry and Natural Resources**

**Aquatic Sciences Major Change (CODO) Requirements**

**Degree Requirements**

**120 Credits Required**

**Departmental/Program Major Courses (65-66 credits)**

**Required Major Courses (56-57 credits)**

- FNR 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology and Society for core)
- FNR 20100 - Marine Biology Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
- FNR 27000 - Landscape-Level Planning Credits: 1.00
- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 35110 - Aquatic Sampling Techniques I Credits: 2.00
- FNR 35150 - Aquatic Sampling Techniques II Credits: 2.00
- FNR 37010 - Natural Resources Practicum Credits: 1.00
- FNR 37100 - Fisheries And Aquatic Sciences Practicum Credits: 5.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
- FNR 38400 - Statistics For Natural Resources Credits: 3.00
- FNR 38500 - Fish Biology And Ecology Credits: 4.00
• FNR 40100 - Limnology Credits: 3.00
• FNR 45600 - Fish And Marine Population Dynamics Credits: 4.00
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• FNR 52700 - Ecotoxicology Credits: 2.00 or
• FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00 or
• FNR 52900 - Disease Ecology Credits: 3.00

Concentration Courses (9 credits)

Required Courses (6 credit)
• FNR 37800 - Marine Biology Practicum Credits: 3.00
• FNR 45800 - Advanced Marine Biology Credits: 3.00

Aquatic Sciences Selective (3 credits)
• AGRY 33700 - Environmental Hydrology Credits: 3.00
• FNR 31300 - Aquaponics Credits: 1.00
• FNR 35910 - Spatial Ecology Credits: 2.00
• FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
• FNR 45200 - Aquaculture Credits: 3.00
• FNR 45300 - Fish Physiology Credits: 3.00
• FNR 45700 - Practical Fisheries Management Credits: 2.00
• FNR 54300 - Conservation Biology I Credits: 3.00

Other Departmental /Program Course Requirements (50-53 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00 ♦
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
• AGRY 25500 - Soil Science Credits: 3.00 or
• AGRY 27000 - Forest Soils Credits: 3.00
  Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00
  Ethics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• PHIL 11100 - Introduction To Ethics Credits: 3.00 or
• PHIL 28000 - Ethics And Animals Credits: 3.00 or
• PHIL 29000 - Environmental Ethics Credits: 3.00
  Physical Science Selective - Credit Hours: 3.00-4.00**
• AGRY 33700 - Environmental Hydrology Credits: 3.00 or
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00 or
• EAPS 10400 - Oceanography Credits: 3.00 or
• PHYS 22000 - General Physics Credits: 4.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (4-5 credits)

• Electives - Credit Hours: 4.00-5.00

Course Requirements and Notes

• **Physical Science Selective**: Other courses in astronomy, chemistry, earth science, geology, hydrology, meteorology, physics, and soil science, if acceptable for the American Fisheries Society "Certified Fisheries Professional" certification. Contact your academic advisor for approval.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements
For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00
- MA 16010 - Applied Calculus I Credits: 3.00 or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00

14-16 Credits

Spring 1st Year
• BTNY 11000 - Introduction To Plant Science Credits: 4.00
• FNR 12500 - Environmental Science And Conservation Credits: 3.00
• FNR 20100 - Marine Biology Credits: 3.00 ♦
• CHM 11200 - General Chemistry Credits: 3.00 ♦
• Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

• FNR 23000 - The World's Forests And Society Credits: 3.00
• FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
• FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00
• FNR 27000 - Landscape-Level Planning Credits: 1.00
• FNR 35110 - Aquatic Sampling Techniques I Credits: 2.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00

16 Credits

Spring 2nd Year

• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00 ♦
• FNR 21000 - Natural Resource Information Management Credits: 3.00 ♦
• FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
• FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
• FNR 35150 - Aquatic Sampling Techniques II Credits: 2.00
• AGRY 25500 - Soil Science Credits: 3.00 or
• AGRY 27000 - Forest Soils Credits: 3.00

14 Credits

Summer Session

• FNR 37010 - Natural Resources Practicum Credits: 1.00
• FNR 37100 - Fisheries And Aquatic Sciences Practicum Credits: 5.00

6 Credits

Fall 3rd Year

• FNR 40100 - Limnology Credits: 3.00
• FNR 37800 - Marine Biology Practicum Credits: 3.00
• FNR 45600 - Fish And Marine Population Dynamics Credits: 4.00
• PHIL 11100 - Introduction To Ethics Credits: 3.00 or
• PHIL 28000 - Ethics And Animals Credits: 3.00 or
• PHIL 29000 - Environmental Ethics Credits: 3.00
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00

16 Credits

Spring 3rd Year

• FNR 38400 - Statistics For Natural Resources Credits: 3.00
• FNR 38500 - Fish Biology And Ecology Credits: 4.00
• Aquatics Selective - Credit Hours: 3.00
• Electives - Credit Hours: 2.00-3.00

12-13 Credits

Fall 4th Year

• FNR 52700 - Ecotoxicology Credits: 2.00 or
• FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00 or
• FNR 52900 - Disease Ecology Credits: 3.00
  Physical Science Selective - Credit Hours: 3.00-4.00***
• AGRY 33700 - Environmental Hydrology Credits: 3.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
• EAPS 10400 - Oceanography Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Additional Written or Oral Communication Selective - Credit Hours: 3.00
• Elective - Credit Hours: 0.00-2.00

13 Credits

Spring 4th Year

• FNR 30500 - Conservation Genetics Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• FNR 45800 - Advanced Marine Biology Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

12 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses
World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Wildlife, BS

About the Program

Learn to apply biological, ecological, economic and social knowledge as you develop and implement sustainable forest management plans. Studies emphasize understanding how forest ecosystems function, the role of natural and human disturbance, and ecosystem resilience. The Forestry major was recently revised to allow students to specialize in one of four concentrations: forest management, forest science, urban forestry, and sustainable biomaterials (the latter is a technology-based degree for making products out of wood). This major prepares the student for careers with public agencies such as state divisions of forestry or the U.S. Forest Service (forest management concentration), private industry and consulting firms (urban forestry, sustainable biomaterials) and graduate school (forest science). The major is accredited by the Society of American Foresters.

You are preparing for work in public organizations (state/federal fish and wildlife), not-for-profit organizations (The Nature Conservancy, Ducks Unlimited), private consulting firms, or for graduate studies (MS, PhD, DVM). This degree meets the educational standards of The Wildlife Society to become a Certified Wildlife Biologist.

Wildlife Website

Wildlife Major Change (CODO) Requirements

Degree Requirements

120 Credits Required
Departmental/Program Major Courses (63-64 credits)

Required Major Courses (55-56 credits)

- FNR 12500 - Environmental Science And Conservation Credits: 3.00 (satisfies Science, Technology, and Society for core)
- FNR 21000 - Natural Resource Information Management Credits: 3.00
- FNR 22500 - Dendrology Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
- FNR 27000 - Landscape-Level Planning Credits: 1.00
- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 33100 - Forest Ecosystems Credits: 3.00
- FNR 34100 - Wildlife Habitat Management Credits: 3.00
- FNR 34800 - Wildlife Investigation Techniques Credits: 3.00
- FNR 35910 - Spatial Ecology Credits: 3.00
- FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
- FNR 37010 - Natural Resources Practicum Credits: 1.00
- FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
- FNR 37300 - Wildlife Practicum Credits: 4.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00 (30000+ level CoA Humanities)
- FNR 38400 - Statistics For Natural Resources Credits: 3.00
- FNR 44700 - Vertebrate Population Dynamics Credits: 4.00
- FNR 46500 - History And Role Of Hunting In North American Wildlife Conservation Credits: 1.00
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- FNR 52700 - Ecotoxicology Credits: 2.00 or
- FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00 or
- FNR 52900 - Disease Ecology Credits: 3.00

Major Selectives (8 credits)

- Botany Selective - Credit Hours: 2.00
- Wildlife Selective - Credit Hours: 6.00
Wildlife Supplemental Information

Other Departmental /Program Course Requirements (50-52 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
- AGRY 27000 - Forest Soils Credits: 3.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
- BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
- BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16500 - Analytic Geometry And Calculus I **Credits:** 4.00
• STAT 30100 - Elementary Statistical Methods **Credits:** 3.00 ♦ (satisfies Information Literacy for core)
  **Ethics Selective** - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• PHIL 11100 - Introduction To Ethics **Credits:** 3.00
• PHIL 28000 - Ethics And Animals **Credits:** 3.00
• PHIL 29000 - Environmental Ethics **Credits:** 3.00

**Microeconomics Selective** - Credit Hours: 3.00 (satisfies Human Culture: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness **Credits:** 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy **Credits:** 3.00
• ECON 25100 - Microeconomics **Credits:** 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Sciences Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

**Electives (4-7 credits)**

• Electives - Credit Hours: 4.00-7.00

**Supplemental List**

• Wildlife Supplemental Information

**GPA Requirements**

• 2.0 GPA required for Bachelor of Science degree.

**College of Agriculture Pass/No Pass Policy**

College of Agriculture Undergraduate Pass/No Pass Policy

**Transfer Credit Policy**

Transfer courses listed in the **Purdue Transfer Equivalency Guide** with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

**College of Agriculture & University Level Requirements**

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

Transfer Credit Policy

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GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

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- Students should be able to fulfill *most, if not all*, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00♦
- CHM 11100 - General Chemistry Credits: 3.00♦
- MA 16010 - Applied Calculus I Credits: 3.00ifers:
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00isers:
- Written Communication Selective - Credit Hours: 3.00-4.00

14-16 Credits

Spring 1st Year

- BTNY 11000 - Introduction To Plant Science Credits: 4.00♦
- CHM 11200 - General Chemistry Credits: 3.00♦
- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00isers:
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00isers:
- ECON 25100 - Microeconomics Credits: 3.00isers:
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- FNR 22500 - Dendrology Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00isers:
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00isers:
- STAT 30100 - Elementary Statistical Methods Credits: 3.00♦isers:
- Humanities or Social Science Selective - Credit Hours: 3.00

13 Credits

Spring 2nd Year

- AGRY 27000 - Forest Soils Credits: 3.00
• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
• FNR 21000 - Natural Resource Information Management Credits: 3.00
• FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
• FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
• FNR 34800 - Wildlife Investigational Techniques Credits: 3.00

15 Credits

Summer Session

• FNR 37010 - Natural Resources Practicum Credits: 1.00
• FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
• FNR 37300 - Wildlife Practicum Credits: 4.00

6 Credits

Fall 3rd Year

• FNR 33100 - Forest Ecosystems Credits: 3.00
• FNR 34100 - Wildlife Habitat Management Credits: 3.00
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• FNR 38400 - Statistics For Natural Resources Credits: 3.00
• Botany Selective - Credit Hours: 2.00
• Wildlife Selective - Credit Hours: 3.00
• Elective - Credit Hours: 2.00-3.00

13-14 Credits

Fall 4th Year

• FNR 27000 - Landscape-Level Planning Credits: 1.00
• FNR 35910 - Spatial Ecology Credits: 2.00
• FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
• FNR 44700 - Vertebrate Population Dynamics Credits: 4.00
• FNR 46500 - History And Role Of Hunting In North American Wildlife Conservation Credits: 1.00
• FNR 52700 - Ecotoxicology Credits: 2.00 or
• FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00 or
• FNR 52900 - Disease Ecology Credits: 3.00
Elective - Credit Hours: 2.00-4.00

13-16 Credits

**Spring 4th Year**

- FNR 30500 - Conservation Genetics **Credits: 3.00**
- PHIL 11100 - Introduction To Ethics **Credits: 3.00** or
- PHIL 28000 - Ethics And Animals **Credits: 3.00** or
- PHIL 29000 - Environmental Ethics **Credits: 3.00**
- Humanities or Social Science Selective - Credit Hours: 3.00
- Wildlife Selective - Credit Hours: 3.00

12 Credits

**Pre-Requisite Information**

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

**World Language Courses**

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

**Critical Course**

The ♦ course is considered critical.

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**Bachelor of Science in Forestry**
Forestry: Forest Management Concentration, BSFOR

About the Program

Learn to apply biological, ecological, economic and social knowledge as you develop and implement sustainable forest management plans. Studies emphasize understanding how forest ecosystems function, the role of natural and human disturbance, and ecosystem resilience. The Forestry major was recently revised to allow students to specialize in one of four concentrations: forest management, forest science, urban forestry, and sustainable biomaterials (the latter is a technology-based degree for making products out of wood). This major prepares the student for careers with public agencies such as state divisions of forestry or the U.S. Forest Service (forest management concentration), private industry and consulting firms (urban forestry, sustainable biomaterials) and graduate school (forest science). The major is accredited by the Society of American Foresters.

Forestry Website

Forestry Major Change (CODO) Requirements

Degree Requirements

124 Credits Required

Departmental/Program Major Courses (68 credits)

Required Major Courses (36 credits)

- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00
- FNR 22500 - Dendrology Credits: 3.00
- FNR 33100 - Forest Ecosystems Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- FNR 35300 - Natural Resources Measurement Credits: 3.00
- FNR 37010 - Natural Resources Practicum Credits: 1.00
- FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
- FNR 37200 - Forestry Practicum Credits: 4.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
- FNR 40700 - Forest Economics Credits: 3.00
- FNR 43400 - Tree Physiology Credits: 3.00
- FNR 43900 - Silviculture Credits: 3.00

Forestry Management Concentration Courses (32 credits)

Forest Management Concentration Required Courses (26 credits)

- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 27000 - Landscape-Level Planning Credits: 1.00
- FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
- FNR 35500 - Quantitative Methods For Resource Management Credits: 3.00
- FNR 40910 - Forest Resources Management Credits: 3.00
- FNR 43300 - Grand Challenges In Forest Management Credits: 3.00
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00 or
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00 or
- FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
- FNR 38400 - Statistics For Natural Resources Credits: 3.00 or
- ENTM 30100 - Experimentation And Analysis Credits: 3.00

Forest Health Selectives (3 credits)

- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 53500 - Intermediate Plant Pathology Credits: 3.00
- BTNY 55800 - Plant Disease Epidemiology Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
- FNR 33300 - Fire Effects In Forest Environments Credits: 1.00

Forestry Selectives (3 credits)

- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 31110 - Identification And Basic Properties Of Wood Credits: 3.00
- FNR 35900 - Spatial Ecology And GIS Credits: 3.00
- FNR 44400 - Arboricultural Practices Credits: 4.00
- FNR 53500 - Forest Regeneration And Restoration Credits: 3.00
- FNR 53600 - Ecology Of Disturbance Credits: 2.00
- FNR 53601 - Ecology Of Disturbance Practicum Credits: 1.00

Other Departmental/Program Course Requirements (48-50 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
- AGRY 27000 - Forest Soils Credits: 3.00
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
- ENGL 42000 - Business Writing Credits: 3.00 or
- ENGL 42100 - Technical Writing Credits: 3.00

Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• ECON 25100 - Microeconomics **Credits: 3.00**
  Ethics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• PHIL 11100 - Introduction To Ethics **Credits: 3.00**
• PHIL 28000 - Ethics And Animals **Credits: 3.00**
• PHIL 29000 - Environmental Ethics **Credits: 3.00**
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

**Electives (6-8 credits)**

• Electives - Credit Hours: 6.00-8.00

**GPA Requirements**

• 2.0 GPA required for Bachelor of Science degree.

**College of Agriculture & University Level Requirements**

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

**College of Agriculture Pass/No Pass Policy**

College of Agriculture Undergraduate Pass/No Pass Policy

**Transfer Credit Policy**

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**GPA Requirements**

• 2.0 GPA required for Bachelor of Science degree.

**University Requirements**
University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

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- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Program Requirements

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- MA 16010 - Applied Calculus I Credits: 3.00 ♦ or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- Oral Communication Selective - Credit Hours: 3.00

14-15 Credits
Spring 1st Year

- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00
- Elective - Credit Hours: 3.00

16-17 Credits

Fall 2nd Year

- FNR 22500 - Dendrology Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

- AGRY 27000 - Forest Soils Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00 ♦
- FNR 35300 - Natural Resources Measurement Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00 or
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00 or
- FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00
- Elective - Credit Hours: 2.00

15 Credits

Summer Session

- FNR 37010 - Natural Resources Practicum Credits: 1.00
- FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
- FNR 37200 - Forestry Practicum Credits: 4.00

6 Credits

Fall 3rd Year

- FNR 23000 - The World's Forests And Society Credits: 3.00
• FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00  
• FNR 33100 - Forest Ecosystems Credits: 3.00  
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00  
• FNR 43400 - Tree Physiology Credits: 3.00

15 Credits

Spring 3rd Year

• FNR 35500 - Quantitative Methods For Resource Management Credits: 3.00  
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00  
• FNR 40700 - Forest Economics Credits: 3.00  
• FNR 38400 - Statistics For Natural Resources Credits: 3.00 or  
• ENTM 30100 - Experimentation And Analysis Credits: 3.00  
• Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Fall 4th Year

• FNR 27000 - Landscape-Level Planning Credits: 1.00  
• FNR 43900 - Silviculture Credits: 3.00  
• ENGL 42000 - Business Writing Credits: 3.00 or  
• ENGL 42100 - Technical Writing Credits: 3.00  
• PHIL 11100 - Introduction To Ethics Credits: 3.00 or  
• PHIL 28000 - Ethics And Animals Credits: 3.00 or  
• PHIL 29000 - Environmental Ethics Credits: 3.00  
• Forest Health Selective - Credit Hours: 3.00  
• Forestry Selective - Credit Hours: 3.00

16 Credits

Spring 4th Year

• FNR 40910 - Forest Resources Management Credits: 3.00  
• FNR 43300 - Grand Challenges In Forest Management Credits: 3.00  
• Humanities or Social Science Selective - Credit Hours: 3.00  
• Elective - Credit Hours: 1.00-3.00

10-12 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses
World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS-Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Forestry: Forest Science Concentration, BSFOR

About the Program

Learn to apply biological, ecological, economic and social knowledge as you develop and implement sustainable forest management plans. Studies emphasize understanding how forest ecosystems function, the role of natural and human disturbance, and ecosystem resilience. The Forestry major was recently revised to allow students to specialize in one of four concentrations: forest management, forest science, urban forestry, and sustainable biomaterials (the latter is a technology-based degree for making products out of wood). This major prepares the student for careers with public agencies such as state divisions of forestry or the U.S. Forest Service (forest management concentration), private industry and consulting firms (urban forestry, sustainable biomaterials) and graduate school (forest science). The major is accredited by the Society of American Foresters.

Forestry Website

Forestry Major Change (CODO) Requirements

Degree Requirements

124 Credits Required

Departmental/Program Major Courses (70 credits)

Required Major Courses (36 credits)
• FNR 12500 - Environmental Science And Conservation Credits: 3.00
• FNR 21000 - Natural Resource Information Management Credits: 3.00
• FNR 22500 - Dendrology Credits: 3.00
• FNR 33100 - Forest Ecosystems Credits: 3.00
• FNR 35300 - Natural Resources Measurement Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00
• FNR 37010 - Natural Resources Practicum Credits: 1.00
• FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
• FNR 37200 - Forestry Practicum Credits: 4.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• FNR 40700 - Forest Economics Credits: 3.00
• FNR 43400 - Tree Physiology Credits: 3.00
• FNR 43900 - Silviculture Credits: 3.00

Forest Science Concentration Courses (34 credits)

Forest Science Concentration Required Courses (22 credits)

• FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
• POL 22300 - Introduction To Environmental Policy Credits: 3.00
• FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00 or
• FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
• FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
• FNR 35500 - Quantitative Methods For Resource Management Credits: 3.00
• FNR 38400 - Statistics For Natural Resources Credits: 3.00 or
• ENTM 30100 - Experimentation And Analysis Credits: 3.00
• FNR 40910 - Forest Resources Management Credits: 3.00
• FNR 49900 - Thesis Credits: 1.00 to 6.00 - Credit Hours: 4.00

Forest Health Selectives (3 credits)

• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 52500 - Intermediate Plant Pathology Credits: 3.00
• BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
• BTNY 55800 - Pathogens Of Plants Credits: 3.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• ENTM 41000 - Applied Insect Biology Credits: 2.00
• ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
• FNR 33300 - Fire Effects In Forest Environments Credits: 1.00

Forest Science Selectives (9 credits)

Biometrics and Statistics

• BIOL 58210 - Ecological Statistics Credits: 3.00
• STAT 50300 - Statistical Methods For Biology Credits: 3.00
• STAT 51200 - Applied Regression Analysis Credits: 3.00
• STAT 51400 - Design Of Experiments Credits: 3.00
Forest Ecology and Silviculture

- AGRY 34900 - Soil Ecology Credits: 3.00
- BIOL 48300 - Great Issues: Environmental And Conservation Biology Credits: 3.00
- BIOL 59100 - Field Ecology Credits: 3.00 or 4.00
- FNR 33300 - Fire Effects In Forest Environments Credits: 1.00
- FNR 53500 - Forest Regeneration And Restoration Credits: 3.00
- FNR 53600 - Ecology Of Disturbance Credits: 2.00
- FNR 53601 - Ecology Of Disturbance Practicum Credits: 1.00
- FNR 54300 - Conservation Biology I Credits: 3.00

Forest Geospatial Analytics

- ASM 21600 - Introduction To Surveying Credits: 1.00
- AT 20900 - Autonomous Aircraft Technology And Maintenance I Credits: 3.00
- FNR 35900 - Spatial Ecology And GIS Credits: 3.00

Plant Biology

- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 48000 - Plant Genetics Credits: 3.00
- AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- BIOL 39500 - Special Assignments Credits: 0.00 to 18.00
- BIOL 41500 - Introduction To Molecular Biology Credits: 3.00
- BIOL 47800 - Introduction To Bioinformatics Credits: 3.00
- BTNY 30200 - Plant Ecology Credits: 3.00
- BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00
- BTNY 55200 - Molecular Approaches In Plant Biology Credits: 3.00
- CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
- CHM 33000 - Introductory Biochemistry Credits: 3.00
- FNR 30500 - Conservation Genetics Credits: 3.00

Other Departmental/Program Course Requirements (48-50 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
- AGRY 27000 - Forest Soils Credits: 3.00
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
- MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)
• ENGL 42000 - Business Writing Credits: 3.00 or
• ENGL 42100 - Technical Writing Credits: 3.00

  Microeconomics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)

• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00

  Ethics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)

• PHIL 11100 - Introduction To Ethics Credits: 3.00
• PHIL 28000 - Ethics And Animals Credits: 3.00
• PHIL 29000 - Environmental Ethics Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (4-6 credits)

• Elective - Credit Hours: 4.00-6.00

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements
University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- MA 16010 - Applied Calculus I Credits: 3.00 or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- Oral Communication Selective - Credit Hours: 3.00

14-15 Credits
Spring 1st Year

- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00
- Elective - Credit Hours: 3.00

16-17 Credits

Fall 2nd Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- FNR 22500 - Dendrology Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
- Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

- AGRY 27000 - Forest Soils Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00 ♦
- FNR 35300 - Natural Resources Measurement Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00 or
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Summer Session

- FNR 37010 - Natural Resources Practicum Credits: 1.00
- FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
- FNR 37200 - Forestry Practicum Credits: 4.00

6 Credits

Fall 3rd Year

- FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
- FNR 33100 - Forest Ecosystems Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
• FNR 43400 - Tree Physiology **Credits:** 3.00
• PHIL 11100 - Introduction To Ethics **Credits:** 3.00 or
• PHIL 28000 - Ethics And Animals **Credits:** 3.00 or
• PHIL 29000 - Environmental Ethics **Credits:** 3.00

15 Credits

**Spring 3rd Year**

• FNR 35500 - Quantitative Methods For Resource Management **Credits:** 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management **Credits:** 3.00
• FNR 40700 - Forest Economics **Credits:** 3.00
• FNR 49900 - Thesis **Credits:** 1.00 to 6.00 - Credit Hours: 1.00
• FNR 38400 - Statistics For Natural Resources **Credits:** 3.00 or
• ENTM 30100 - Experimentation And Analysis **Credits:** 3.00
• Forest Science Selective - Credit Hours: 3.00

16 Credits

**Fall 4th Year**

• ENGL 42000 - Business Writing **Credits:** 3.00 or
• ENGL 42100 - Technical Writing **Credits:** 3.00
• FNR 43900 - Silviculture **Credits:** 3.00
• FNR 49900 - Thesis **Credits:** 1.00 to 6.00 - Credit Hours: 1.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Forest Science Selective - Credit Hours: 3.00

13 Credits

**Spring 4th Year**

• FNR 40910 - Forest Resources Management **Credits:** 3.00
• FNR 49900 - Thesis **Credits:** 1.00 to 6.00 - Credit Hours: 2.00
• Forest Health Selective - Credit Hours: 3.00
• Forest Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00-3.00

12-14 Credits

**Pre-Requisite Information**

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

**World Language Courses**
World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

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The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Forestry: Sustainable Biomaterials Concentration, BSFOR

About the Program

Learn to apply biological, ecological, economic and social knowledge as you develop and implement sustainable forest management plans. Studies emphasize understanding how forest ecosystems function, the role of natural and human disturbance, and ecosystem resilience. The Forestry major was recently revised to allow students to specialize in one of four concentrations: forest management, forest science, urban forestry, and sustainable biomaterials (the latter is a technology-based degree for making products out of wood). This major prepares the student for careers with public agencies such as state divisions of forestry or the U.S. Forest Service (forest management concentration), private industry and consulting firms (urban forestry, sustainable biomaterials) and graduate school (forest science). The major is accredited by the Society of American Foresters.

Forestry Website

Forestry Major Change (CODO) Requirements

Degree Requirements

124 Credits Required

Departmental/Program Major Courses (69 credits)

Required Major Courses (36 credits)
• FNR 12500 - Environmental Science And Conservation Credits: 3.00
• FNR 21000 - Natural Resource Information Management Credits: 3.00
• FNR 22500 - Dendrology Credits: 3.00
• FNR 33100 - Forest Ecosystems Credits: 3.00
• FNR 35300 - Natural Resources Measurement Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00
• FNR 37010 - Natural Resources Practicum Credits: 1.00
• FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
• FNR 37200 - Forestry Practicum Credits: 4.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• FNR 40700 - Forest Economics Credits: 3.00
• FNR 43400 - Tree Physiology Credits: 3.00
• FNR 43900 - Silviculture Credits: 3.00

Sustainable Biomaterials Concentration Courses (33 credits)

Sustainable Biomaterials Required Courses (21 credits)

• FNR 22310 - Introduction To Environmental Policy Credits: 3.00
• FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
• FNR 31110 - Identification And Basic Properties Of Wood Credits: 3.00
• FNR 48410 - Sustainable Wood Products, Furniture Design And Manufacturing Credits: 3.00
• IET 23500 - Introduction To Systems Thinking And Process Improvement Credits: 3.00
• IET 31600 - Statistical Quality Control Credits: 3.00
• IET 33400 - Economic Analysis For Technology Systems Credits: 3.00

Sustainable Biomaterials Selectives (12 credits)

• AD 49000 - Special Problems In Art And Design Credits: 1.00 to 6.00
• AD 53500 - Furniture Design Credits: 3.00
• AGEC 31000 - Farm Organization Credits: 3.00
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• CGT 11000 - Technical Graphics Communications Credits: 3.00
• CSR 30900 - Leadership Strategies Credits: 3.00
• CSR 33200 - Cross-Cultural Marketing And International Retailing Credits: 3.00
• ENTR 31000 - Marketing And Management For New Ventures Credits: 3.00
• FNR 23000 - The World's Forests And Society Credits: 3.00
• FNR 35500 - Quantitative Methods For Resource Management Credits: 3.00
• FNR 40910 - Forest Resources Management Credits: 3.00
• IET 43530 - Operations Planning And Management Credits: 3.00
• IET 43540 - Facilities Planning And Material Handling Credits: 3.00
• MET 14300 - Materials And Processes I Credits: 3.00
• MET 24500 - Manufacturing Systems Credits: 3.00
• TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
• TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00

Other Departmental/Program Course Requirements (48-50 credits)
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
• AGRY 27000 - Forest Soils Credits: 3.00
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦ (satisfies Information Literacy for core)

Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavior/Social Sciences for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00

Ethics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• PHIL 11100 - Introduction To Ethics Credits: 3.00
• PHIL 28000 - Ethics And Animals Credits: 3.00
• PHIL 29000 - Environmental Ethics Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00 or
• ENGL 42100 - Technical Writing Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (5-7 credits)

• Elective - Credit Hours: 5.00-7.00

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy
Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost’s Website.

- Human Cultures: Behavioral/Social Science (BSS)
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- Information Literacy (IL)
- Oral Communication (OC)
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- Science #1 (SCI)
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- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

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- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦
• MA 16010 - Applied Calculus I Credits: 3.00 ♦
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• Oral Communication Selective - Credit Hours: 3.00

14-15 Credits

Spring 1st Year

• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
• CHM 11200 - General Chemistry Credits: 3.00 ♦
• FNR 12500 - Environmental Science And Conservation Credits: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00
• Elective - Credit Hours: 3.00

16-17 Credits

Fall 2nd Year

• FNR 22310 - Introduction To Environmental Policy Credits: 3.00
• FNR 22500 - Dendrology Credits: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00
  Economics Selective - Credit Hours: 3.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 ♦
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 ♦
• ECON 25100 - Microeconomics Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

• AGRY 27000 - Forest Soils Credits: 3.00
• FNR 21000 - Natural Resource Information Management Credits: 3.00 ♦
• FNR 35300 - Natural Resources Measurement Credits: 3.00
  Ethics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• PHIL 11100 - Introduction To Ethics Credits: 3.00 ♦
• PHIL 28000 - Ethics And Animals Credits: 3.00 ♦
• PHIL 29000 - Environmental Ethics Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Summer Session
• FNR 37010 - Natural Resources Practicum Credits: 1.00
• FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
• FNR 37200 - Forestry Practicum Credits: 4.00

6 Credits

Fall 3rd Year

• FNR 33100 - Forest Ecosystems Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00
• FNR 43400 - Tree Physiology Credits: 3.00
• Sustainable Biomaterials Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00-3.00

13-15 Credits

Spring 3rd Year

• FNR 31110 - Identification And Basic Properties Of Wood Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• FNR 40700 - Forest Economics Credits: 3.00
• IET 23500 - Introduction To Systems Thinking And Process Improvement Credits: 3.00
• Sustainable Biomaterials Selective - Credit Hours: 3.00

15 Credits

Fall 4th Year

• FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
• FNR 43900 - Silviculture Credits: 3.00
• FNR 48410 - Sustainable Wood Products, Furniture Design And Manufacturing Credits: 3.00 (Capstone)
• Sustainable Biomaterials Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00

13 Credits

Spring 4th Year

• ENGL 42000 - Business Writing Credits: 3.00 or
• ENGL 42100 - Technical Writing Credits: 3.00
• IET 31600 - Statistical Quality Control Credits: 3.00
• IET 33400 - Economic Analysis For Technology Systems Credits: 3.00
• Sustainable Biomaterials Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits
Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Forestry: Urban Forestry, BSFOR

About the Program

Learn to apply biological, ecological, economic and social knowledge as you develop and implement sustainable forest management plans. Studies emphasize understanding how forest ecosystems function, the role of natural and human disturbance, and ecosystem resilience. The Forestry major was recently revised to allow students to specialize in one of four concentrations: forest management, forest science, urban forestry, and sustainable biomaterials (the latter is a technology-based degree for making products out of wood). This major prepares the student for careers with public agencies such as state divisions of forestry or the U.S. Forest Service (forest management concentration), private industry and consulting firms (urban forestry, sustainable biomaterials) and graduate school (forest science). The major is accredited by the Society of American Foresters.

Forestry Website

Forestry Major Change (CODO) Requirements

Degree Requirements
124 Credits Required

Departmental/Program Major Courses (75 credits)

Required Major Courses (36 credits)

- FNR 12500 - Environmental Science And Conservation Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00
- FNR 22500 - Dendrology Credits: 3.00
- FNR 33100 - Forest Ecosystems Credits: 3.00
- FNR 35300 - Natural Resources Measurement Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- FNR 37010 - Natural Resources Practicum Credits: 1.00
- FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
- FNR 37200 - Forestry Practicum Credits: 4.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
- FNR 37500 - Forest Economics Credits: 3.00
- FNR 40700 - Forest Economics Credits: 3.00
- FNR 43900 - Silviculture Credits: 3.00

Urban Forestry Concentration Courses (39 credits)

Urban Forestry Required Courses (33 credits)

- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 27000 - Landscape-Level Planning Credits: 1.00
- FNR 35500 - Quantitative Methods For Resource Management Credits: 3.00
- FNR 35910 - Spatial Ecology Credits: 2.00
- FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
- FNR 40910 - Forest Resources Management Credits: 3.00
- FNR 44400 - Arboricultural Practices Credits: 4.00
- FNR 44500 - Urban Forest Issues Credits: 3.00
- FNR 58600 - Urban Ecology Credits: 3.00
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00 or
- POL 22300 - Introduction To Environmental Policy Credits: 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00 or
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00 or
- FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00

Urban Forestry Concentration Selectives (6 credits)

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• ENTM 40100 - Addressing Grand Challenges Through Insect Biology Credits: 1.00
• FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
• FNR 31110 - Identification And Basic Properties Of Wood Credits: 3.00
• HORT 21700 - Woody Landscape Plants Credits: 4.00
• HORT 30100 - Plant Physiology Credits: 4.00
• HORT 31700 - Landscape Contracting And Management Credits: 3.00
• LA 32500 - Ecological Landscape Performance And Planting Credits: 3.00
• LA 32600 - Studio V: Community Design And Planning Credits: 4.00

Other Departmental/Program Course Requirements (45-47 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
• AGRY 27000 - Forest Soils Credits: 3.00
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core)
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core) or
• MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavior/Social Sciences for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
  Ethics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• PHIL 11100 - Introduction To Ethics Credits: 3.00
• PHIL 28000 - Ethics And Animals Credits: 3.00
• PHIL 29000 - Environmental Ethics Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00 or
• ENGL 42100 - Technical Writing Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Electives (2-4 credit)

• Electives - Credit Hours: 2.00-4.00

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost’s Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).
Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 11900 - Introduction To Forestry And Natural Resources Academic Programs Credits: 0.50
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- MA 16010 - Applied Calculus I Credits: 3.00 or
- MA 16500 - Analytic Geometry And Calculus I Credits: 4.00
- Written Communication Selective - Credit Hours: 3.00-4.00

14-16 Credits

Spring 1st Year

- BTNY 12100 - Principles Of Plant Biology II Credits: 4.00 ♦
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- FNR 12500 - Environmental Science And Conservation Credits: 3.00
  Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00
- Oral Communication Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- FNR 22500 - Dendrology Credits: 3.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 ♦
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00 or
- FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00 or
- FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00

13 Credits
Spring 2nd Year

- AGRY 27000 - Forest Soils Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00
- FNR 35300 - Natural Resources Measurement Credits: 3.00
- Ethics Selective - Credit Hours: 3.00
- PHIL 11100 - Introduction To Ethics Credits: 3.00
- PHIL 28000 - Ethics And Animals Credits: 3.00
- PHIL 29000 - Environmental Ethics Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Summer Session

- FNR 37010 - Natural Resources Practicum Credits: 1.00
- FNR 37050 - Forest Habitats And Communities Practicum Credits: 1.00
- FNR 37200 - Forestry Practicum Credits: 4.00

6 Credits

Fall 3rd Year

- FNR 33100 - Forest Ecosystems Credits: 3.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- FNR 43400 - Tree Physiology Credits: 3.00
- FNR 44400 - Arboricultural Practices Credits: 4.00
- FNR 22310 - Introduction To Environmental Policy Credits: 3.00
- POL 22300 - Introduction To Environmental Policy Credits: 3.00

16 Credits

Spring 3rd Year

- FNR 35500 - Quantitative Methods For Resource Management Credits: 3.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
- FNR 40700 - Forest Economics Credits: 3.00
- FNR 44500 - Urban Forest Issues Credits: 3.00
- Urban Forest Selective - Credit Hours: 3.00

15 Credits

Fall 4th Year

- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
- FNR 27000 - Landscape-Level Planning Credits: 1.00
• FNR 35910 - Spatial Ecology Credits: 2.00
• FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
• FNR 43900 - Silviculture Credits: 3.00
• FNR 58600 - Urban Ecology Credits: 3.00
• Elective - Credit Hours: 2.00-3.00

15-16 Credits

Spring 4th Year

• FNR 40910 - Forest Resources Management Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00 or
• ENGL 42100 - Technical Writing Credits: 3.00
• Urban Forest Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Elective - Credit Hours: 0.00-1.00

12-13 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

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**Minor**

**Aquatic Sciences Minor**

Requirements for the Minor (16 credits)

**Required Courses (7 credits)**

- FNR 20100 - Marine Biology **Credits:** 3.00
- FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles **Credits:** 3.00
- FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles **Credits:** 1.00

**Selectives (9 credits)**

At least 6 credits from A or B Focus Area. (Additional 3 credits from either A or B Focus Area or Selective List)

**A. Fisheries and Aquaculture Focus**

- FNR 31300 - Aquaponics **Credits:** 1.00
- FNR 38500 - Fish Biology And Ecology **Credits:** 4.00
- FNR 45200 - Aquaculture **Credits:** 3.00
- FNR 45300 - Fish Physiology **Credits:** 3.00
- FNR 45600 - Fish And Marine Population Dynamics **Credits:** 4.00
- FNR 45700 - Practical Fisheries Management **Credits:** 2.00

**B. Marine and Freshwater Biology**

- EAPS 10400 - Oceanography **Credits:** 3.00
- FNR 37800 - Marine Biology Practicum **Credits:** 3.00
- FNR 40100 - Limnology **Credits:** 3.00
- FNR 45800 - Advanced Marine Biology **Credits:** 3.00

**Selective**

- AGRY 33700 - Environmental Hydrology **Credits:** 3.00
- EAPS 20000 - Water World: Processes And Challenges In Global Hydrology **Credits:** 3.00
- ENTM 24200 - Data Science **Credits:** 3.00
- ENTM 30100 - Experimentation And Analysis **Credits:** 3.00
- FNR 35100 - Aquatic Sampling Techniques **Credits:** 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00
• FNR 52900 - Disease Ecology Credits: 3.00

Notes

• Departmental permission is not required to enroll in this minor.
• Other FNR 49800 or 59800 courses, with FNR approval may be used.
• For students in other FNR majors, courses required in the student's major cannot be used to meet the 9 credits of selectives for this minor.

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Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Digital Natural Resources Minor

The Digital Natural Resources Minor will train students in a wide-array of cutting-edge methods that leverage emerging technologies to sustainably manage our natural resources. This minor emphasizes new approaches to data acquisition (UAS-, aerial- and satellite-based platforms), analysis and novel applications in natural resources. The minor is comprised of 15 credit hours based on 4 selective lists. It is open to all majors.

Requirements for the Minor (15 credits)

Data Acquisition (6 Credits)

• AGRY 54500 - Remote Sensing Of Land Resources Credits: 3.00
• AT 10901 - Introduction To Uncrewed Aircraft System Operations Credits: 3.00
• AT 30901 - Introduction To UAS Sensor Technology Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00

Data Analysis (3 Credits)

• ASM 53200 - Introduction To Agricultural Informatics Credits: 3.00
• FNR 21000 - Natural Resource Information Management Credits: 3.00
• ILS 25000 - Introduction To Geographic Information Systems Credits: 3.00
Data Ethics (3 Credits)

- ILS 23000 - Data Science And Society: Ethical Legal Social Issues Credits: 3.00
- PHIL 20800 - Ethics Of Data Science Credits: 3.00

Data Applications (3 Credits)

- ASM 54000 - Geographic Information System Application Credits: 3.00
- FNR 35910 - Spatial Ecology Credits: 2.00
- FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
- FNR 40100 - Limnology Credits: 3.00
- FNR 49800 - Special Assignments Credits: 1.00 to 3.00 - Title: "Environmental Sensors and Data"
- FNR 55800 - Remote Sensing Analysis And Applications Credits: 3.00

Notes

- Departmental permission is not required to enroll in this minor.
- For students in FNR majors, courses required in the student's major cannot be used to meet more than 6 credits of selectives for this minor.
- Other courses taught under a temporary course number can be used for individual selective lists with FNR prior approval.
- FNR 49800 is currently being taught under a temporary course number, but is in various stages of transitioning to a permanent course number. Selective lists will be updated in the future to reflect the permanent course number.

Disclaimer

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Pre-Requisite Information

For pre-requisite information, log in to mypurdu.purdue.edu and click here.

Forest Ecosystems Minor

Requirements for the Minor (18 credits)

Required Courses (12 credits)

- FNR 22500 - Dendrology Credits: 3.00
- FNR 33100 - Forest Ecosystems Credits: 3.00
- FNR 33800 - Introduction To Silviculture Credits: 3.00
- FNR 35300 - Natural Resources Measurement Credits: 3.00
Selective Courses (6 credits)

- AGRY 27000 - Forest Soils Credits: 3.00
- BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00
- FNR 23000 - The World's Forests And Society Credits: 3.00
- FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
- FNR 33000 - Fire Effects In Forest Environments Credits: 1.00
- FNR 35700 - Fundamental Remote Sensing Credits: 3.00
- FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
- FNR 40700 - Forest Economics Credits: 3.00
- FNR 43400 - Tree Physiology Credits: 3.00
- FNR 53600 - Ecology Of Disturbance Credits: 2.00
- FNR 53601 - Ecology Of Disturbance Practicum Credits: 1.00

Notes

- Departmental permission is not required to enroll in this minor.
- Other FNR 49800 or FNR 59800 courses, with FNR approval may be used.
- For students in FNR majors, courses required in the student's major cannot be used to meet the 6 credits of selectives for this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Furniture Design Minor

Requirements for the Minor (18 credits)

Required Courses (12 credits)

- AD 34000 - Furniture Development Credits: 3.00
- FNR 31110 - Identification And Basic Properties Of Wood Credits: 3.00
- FNR 41910 - Furniture Product Development And Strength Design Credits: 3.00
- FNR 48410 - Sustainable Wood Products, Furniture Design And Manufacturing Credits: 3.00
Selective Courses (6 Credits)

- AD 21500 - Materials And Processes **Credits:** 3.00
- AD 22800 - Visual Communication Design Computing I **Credits:** 3.00
- AD 25600 - Presentation Techniques **Credits:** 3.00
- AD 53500 - Furniture Design **Credits:** 3.00
- MFET 10301 - Geometric Modeling Applications **Credits:** 3.00
- MET 10200 - Production Design And Specifications **Credits:** 3.00

Note

- Other FNR 49800 or FNR 59800 courses, with FNR approval may be used.
- Departmental permission is not required to enroll in this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Urban Forestry Minor

Requirements for the Minor (16 credits)

A. Required Courses (10 credits)

- FNR 44400 - Arboricultural Practices **Credits:** 4.00
- FNR 44500 - Urban Forest Issues **Credits:** 3.00
- FNR 58600 - Urban Ecology **Credits:** 3.00

B. Selective Courses (6 credits)

- AGEC 33000 - Management Methods For Agricultural Business **Credits:** 3.00
- AGEC 33100 - Principles Of Industrial Selling **Credits:** 3.00
- AGRY 25500 - Soil Science **Credits:** 3.00
- BTNY 30100 - Introductory Plant Pathology **Credits:** 3.00
- ENTM 41000 - Applied Insect Biology **Credits:** 2.00
- ENTM 41001 - Insects Of Urban Landscapes **Credits:** 1.00
• FNR 22310 - Introduction To Environmental Policy Credits: 3.00
• FNR 31110 - Identification And Basic Properties Of Wood Credits: 3.00
• FNR 33800 - Introduction To Silviculture Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00
• FNR 35910 - Spatial Ecology Credits: 2.00
• FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
• FNR 43400 - Tree Physiology Credits: 3.00
• HORT 21700 - Woody Landscape Plants Credits: 4.00
• HORT 31700 - Landscape Contracting And Management Credits: 3.00

Notes

• Departmental permission is not required to enroll in this minor.
• Other FNR 49800 or 59800 courses, with FNR approval may be used.
• For students in other FNR majors, courses required in the student's major cannot be used to meet the eight credits of selectives for this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Wildlife Science Minor

Requirements for the Minor (17 credits)

Required Courses (11 credits)

• FNR 24000 - Wildlife In America Credits: 3.00
• FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
• FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 1.00
• FNR 24250 - Laboratory In Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 1.00
• FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
• FNR 25250 - Laboratory In Ecology And Systematics Of Mammals And Birds Credits: 1.00

Selective Courses (6 credits)

• ANTH 23500 - The Great Apes Credits: 3.00
• ANTH 33500 - Primate Behavior Credits: 3.00
• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
• BIOL 48300 - Great Issues: Environmental And Conservation Biology Credits: 3.00
• BIOL 58000 - Evolution Credits: 3.00
• FNR 30500 - Conservation Genetics Credits: 3.00
• FNR 33300 - Fire Effects In Forest Environments Credits: 1.00
• FNR 35910 - Spatial Ecology Credits: 2.00
• FNR 35950 - Spatial Ecology Laboratory Credits: 1.00
• FNR 43200 - Human-Wildlife Conflicts Credits: 3.00
• FNR 46000 - International Natural Resources Summer Program Credits: 3.00
• FNR 52700 - Ecotoxicology Credits: 2.00
• FNR 52800 - Wildlife And Environmental Forensics Credits: 2.00
• FNR 52900 - Disease Ecology Credits: 3.00
• FNR 53600 - Ecology Of Disturbance Credits: 2.00
• FNR 54300 - Conservation Biology I Credits: 3.00
• FNR 56700 - Advanced Mammalogy Credits: 3.00
• FNR 57100 - Advanced Ornithology Credits: 3.00

Notes

- Departmental permission is not required to enroll in this minor.
- Other FNR 49800 or FNR 59800 courses, with FNR approval may be used.
- For students in FNR majors, courses required in the student's major cannot be used to meet the 6 credits of selectives for this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Wood Products Manufacturing Technology Minor

Requirements for the Minor (15 credits)

Required Courses (9 credits)

• FNR 30110 - Sustainable Wood Products Manufacturing Credits: 3.00
• FNR 31110 - Identification And Basic Properties Of Wood Credits: 3.00
• FNR 48410 - Sustainable Wood Products, Furniture Design And Manufacturing Credits: 3.00
Selective Courses (6 credits)

- AD 49000 - Special Problems In Art And Design Credits: 1.00 to 6.00
- AD 53500 - Furniture Design Credits: 3.00
- FNR 41910 - Furniture Product Development And Strength Design Credits: 3.00
- MET 14300 - Materials And Processes I Credits: 3.00
- MET 24500 - Manufacturing Systems Credits: 3.00
- MFET 10301 - Geometric Modeling Applications Credits: 3.00
- IET 23500 - Introduction To Systems Thinking And Process Improvement Credits: 3.00
- IET 43530 - Operations Planning And Management Credits: 3.00
- IET 43540 - Facilities Planning And Material Handling Credits: 3.00

Note

- Departmental permission is not required to enroll in this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Non-Degree

Forestry Supplemental Information

Forest Health Selectives

- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 52500 - Intermediate Plant Pathology Credits: 3.00
- BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
- BTNY 55800 - Pathogens Of Plants Credits: 3.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
- FNR 33300 - Fire Effects In Forest Environments Credits: 1.00
Forestry Selectives for Forest Management Concentration

- FNR 30500 - Conservation Genetics Credits: 3.00
- FNR 31110 - Identification And Basic Properties Of Wood Credits: 3.00
- FNR 35900 - Spatial Ecology And GIS Credits: 3.00
- FNR 44400 - Arboricultural Practices Credits: 4.00
- FNR 53500 - Forest Regeneration And Restoration Credits: 3.00
- FNR 53600 - Ecology Of Disturbance Credits: 2.00
- FNR 53601 - Ecology Of Disturbance Practicum Credits: 1.00

Forest Science Concentration Selectives

Biometrics and Statistics

- BIOL 58210 - Ecological Statistics Credits: 3.00
- STAT 50300 - Statistical Methods For Biology Credits: 3.00
- STAT 51200 - Applied Regression Analysis Credits: 3.00
- STAT 51400 - Design Of Experiments Credits: 3.00

Forest Ecology and Silviculture

- AGRY 34900 - Soil Ecology Credits: 3.00
- BIOL 48300 - Great Issues: Environmental And Conservation Biology Credits: 3.00
- BIOL 59100 - Field Ecology Credits: 3.00 or 4.00
- FNR 33300 - Fire Effects In Forest Environments Credits: 1.00
- FNR 53500 - Forest Regeneration And Restoration Credits: 3.00
- FNR 53600 - Ecology Of Disturbance Credits: 2.00
- FNR 53601 - Ecology Of Disturbance Practicum Credits: 1.00
- FNR 54300 - Conservation Biology I Credits: 3.00

Forest Geospatial Analytics

- AT 20900 - Autonomous Aircraft Technology And Maintenance I Credits: 3.00
- ASM 21600 - Introduction To Surveying Credits: 1.00
- FNR 35900 - Spatial Ecology And GIS Credits: 3.00

Plant Biology Selectives

- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 48000 - Plant Genetics Credits: 3.00
- AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
- BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
- BIOL 39500 - Special Assignments Credits: 0.00 to 18.00
- BIOL 41500 - Introduction To Molecular Biology Credits: 3.00
- BIOL 47800 - Introduction To Bioinformatics Credits: 3.00
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BTNY 30200</td>
<td>Plant Ecology</td>
<td>3.00</td>
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<tr>
<td>BTNY 30500</td>
<td>Plant Evolution And Taxonomy</td>
<td>3.00</td>
</tr>
<tr>
<td>BTNY 35000</td>
<td>Biotechnology In Agriculture</td>
<td>3.00</td>
</tr>
<tr>
<td>BTNY 42000</td>
<td>Plant Cellular And Developmental Biology</td>
<td>3.00</td>
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<tr>
<td>BTNY 55200</td>
<td>Molecular Approaches In Plant Biology</td>
<td>3.00</td>
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<tr>
<td>CHM 25500</td>
<td>Organic Chemistry For The Life Sciences I</td>
<td>3.00</td>
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<tr>
<td>CHM 53300</td>
<td>Introductory Biochemistry</td>
<td>3.00</td>
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<tr>
<td>FNR 30500</td>
<td>Conservation Genetics</td>
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**Sustainable Biomaterials Concentration Selectives (12 Credits)**

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<th>Course Code</th>
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<tr>
<td>AD 49000</td>
<td>Special Problems In Art And Design</td>
<td>1.00 to 6.00</td>
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<tr>
<td>AD 53500</td>
<td>Furniture Design</td>
<td>3.00</td>
</tr>
<tr>
<td>AGEC 31000</td>
<td>Farm Organization</td>
<td>3.00</td>
</tr>
<tr>
<td>AGEC 32100</td>
<td>Principles Of Commodity Marketing</td>
<td>3.00</td>
</tr>
<tr>
<td>AGEC 33100</td>
<td>Principles Of Industrial Selling</td>
<td>3.00</td>
</tr>
<tr>
<td>CSR 30900</td>
<td>Leadership Strategies</td>
<td>3.00</td>
</tr>
<tr>
<td>CSR 33200</td>
<td>Cross-Cultural Marketing And International Retailing</td>
<td>3.00</td>
</tr>
<tr>
<td>ENTR 31000</td>
<td>Marketing And Management For New Ventures</td>
<td>3.00</td>
</tr>
<tr>
<td>FNR 23000</td>
<td>The World's Forests And Society</td>
<td>3.00</td>
</tr>
<tr>
<td>FNR 35500</td>
<td>Quantitative Methods For Resource Management</td>
<td>3.00</td>
</tr>
<tr>
<td>FNR 40910</td>
<td>Forest Resources Management</td>
<td>3.00</td>
</tr>
<tr>
<td>FNR 41910</td>
<td>Furniture Product Development And Strength Design</td>
<td>3.00</td>
</tr>
<tr>
<td>IET 43530</td>
<td>Operations Planning And Management</td>
<td>3.00</td>
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<tr>
<td>IET 43540</td>
<td>Facilities Planning And Material Handling</td>
<td>3.00</td>
</tr>
<tr>
<td>MET 14300</td>
<td>Materials And Processes I</td>
<td>3.00</td>
</tr>
<tr>
<td>MET 24500</td>
<td>Manufacturing Systems</td>
<td>3.00</td>
</tr>
<tr>
<td>MFET 10301</td>
<td>Geometric Modeling Applications</td>
<td>3.00</td>
</tr>
<tr>
<td>TLI 11200</td>
<td>Foundations Of Organizational Leadership</td>
<td>3.00</td>
</tr>
<tr>
<td>TLI 15200</td>
<td>Business Principles For Organizational Leadership</td>
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**Forestry: Forest Management Concentration Supplemental Information**

**Forestry Selectives**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FNR 30500</td>
<td>Conservation Genetics</td>
<td>3.00</td>
</tr>
<tr>
<td>FNR 31110</td>
<td>Identification And Basic Properties Of Wood</td>
<td>3.00</td>
</tr>
<tr>
<td>FNR 35900</td>
<td>Spatial Ecology And GIS</td>
<td>3.00</td>
</tr>
<tr>
<td>FNR 44400</td>
<td>Arboricultural Practices</td>
<td>4.00</td>
</tr>
<tr>
<td>FNR 53500</td>
<td>Forest Regeneration And Restoration</td>
<td>3.00</td>
</tr>
<tr>
<td>FNR 53600</td>
<td>Ecology Of Disturbance</td>
<td>2.00</td>
</tr>
<tr>
<td>FNR 53601</td>
<td>Ecology Of Disturbance Practicum</td>
<td>1.00</td>
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</tbody>
</table>

**Forest Health Selectives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BTNY 30100</td>
<td>Introductory Plant Pathology</td>
<td>3.00</td>
</tr>
</tbody>
</table>
• BTNY 52500 - Intermediate Plant Pathology Credits: 3.00
• BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
• BTNY 55800 - Pathogens Of Plants Credits: 3.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• ENTM 41000 - Applied Insect Biology Credits: 2.00
• ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
• FNR 33300 - Fire Effects In Forest Environments Credits: 1.00

Wildlife Supplemental Information

Botany Selective (2 credits)
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30200 - Plant Ecology Credits: 3.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
• FNR 43400 - Tree Physiology Credits: 3.00
• FNR 53600 - Ecology Of Disturbance Credits: 2.00
• HORT 20100 - Plant Propagation Credits: 3.00
• HORT 21810 - Flowers For Color Credits: 1.00

Wildlife Selective (6 credits)

• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
• ANSC 30300 - Animal Behavior Credits: 3.00
• ANSC 40400 - Animal Welfare Credits: 3.00
• ANTH 23500 - The Great Apes Credits: 3.00
• ANTH 33500 - Primate Behavior Credits: 3.00
• BTNY 30200 - Plant Ecology Credits: 3.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
• CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• ENTM 31100 - Insect Ecology Credits: 3.00
• ENTM 33500 - Introduction To Insect Identification Credits: 4.00
• FNR 20100 - Marine Biology Credits: 3.00
• FNR 23000 - The World's Forests And Society Credits: 3.00
• FNR 33300 - Fire Effects In Forest Environments Credits: 1.00
• FNR 33900 - Principles Of Silviculture Credits: 3.00
• FNR 35100 - Aquatic Sampling Techniques Credits: 3.00
• FNR 35300 - Natural Resources Measurement Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00
• FNR 37800 - Marine Biology Practicum Credits: 3.00
• FNR 38500 - Fish Biology And Ecology Credits: 4.00
• FNR 40100 - Limnology Credits: 3.00
- Department of Horticulture and Landscape Architecture

Overview

Welcome to the Department of Horticulture and Landscape Architecture at Purdue University. The mission of the Department of Horticulture and Landscape Architecture is both education and discovery. Our faculty is committed to teaching, counseling students, and enjoys a worldwide reputation for excellence in research related to horticultural crops.

Our goal is to provide the student with the necessary technical information to be immediately successful in today’s job market. Beyond that, we strive to provide students with the analytical skills necessary to interpret new information as the world of horticulture, landscape architecture, turf management and sustainable farming continues to change. In addition, our curricula are designed to provide you with communication skills, analytical skills and sensitivity to cultural diversity necessary for success in an increasingly global economy.

Upon graduation, you will leave Purdue with a wealth of knowledge and the skills for continued life-long learning. This commitment to quality education by our faculty makes the Department of Horticulture and Landscape Architecture at Purdue University one of the first places potential employers turn for employees.

Faculty (website)

Department of Horticulture & Landscape Architecture (website)

Contact Information

Department of Horticulture & Landscape Architecture
Purdue University
Horticulture Building
625 Agriculture Mall Dr.
West Lafayette, IN 47907
The main office for the department is located in room 207 of the HORT Building.

Future Undergraduate Students (website)

Graduate Information

For Graduate Information please see Horticulture and Landscape Architecture Graduate Program Information.

Bachelor of Science

Horticulture: Horticultural Production and Marketing
Concentration, BS

About the Program

Horticultural production and marketing prepares students in the commercial production of horticultural crops and business management of horticultural enterprises. Graduates may manage greenhouses or nurseries, floral or plant shops, garden centers, orchards, vegetable farms, and farm markets. They may be involved with development, distribution, or sales of equipment, chemicals, or plant materials.

Horticulture Website

Horticulture Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (76 credits)

Required Major Courses (17 credits)

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 20100 - Plant Propagation Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 Must take for 3.00 credits
Horticultural Production and Marketing Concentration Required Courses (32 credits)

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- BTNY 30400 - Introductory Weed Science Credits: 3.00
- BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
- HORT 43500 - Developing An Agricultural Startup Credits: 4.00
- HORT 51300 - Nutrition Of Horticulture Crops Credits: 1.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core)
- MGMT 20000 - Introductory Accounting Credits: 3.00 or
- MGMT 21200 - Business Accounting Credits: 3.00
- SFS 21000 - Small Farm Experience I Credits: 3.00 or
- SFS 21100 - Small Farm Experience II Credits: 3.00

Entomology Selective - Credit Hours: 3.00
- ENTM 20600 - General Entomology Credits: 2.00 and
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
  OR
- ENTM 41000 - Applied Insect Biology Credits: 2.00
  and
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00 or
- ENTM 41002 - Insects Of Agricultural Crops Credits: 1.00

Horticultural Production and Marketing Concentration Selective Courses (25 credits)

- Horticulture Production & Marketing Concentration Selectives - Credit Hours: 12.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 6.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Science, Technology and Society Selective - Credit Hours: 1.00 (satisfies Science, Technology and Society for core)

Other Departmental/Program Course Requirements (36-37 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core)
- CHM 25700 - Organic Chemistry Credits: 4.00

  Statistics Selective - Credit Hours: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core) or
- STAT 50300 - Statistical Methods For Biology Credits: 3.00 or
- STAT 51100 - Statistical Methods Credits: 3.00 or
• STAT 51200 - Applied Regression Analysis Credits: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (9-10 credits)

• Elective - Credit Hours: 9.00-10.00

Supplemental List

• Horticulture Supplemental Information

Internship/Work Experience Requirement

A minimum of 320 hours of post-high school work experience related to the major/concentration is required for a College of Agriculture baccalaureate of science degree from the Department of Horticulture and Landscape Architecture. Summer work, intra-semester jobs, or internships can be used to satisfy this requirement. Contact your academic advisor to learn more about the requirement and how to document your hours. The completed employment verification is required at least one semester before the student's intended graduation term.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.
University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00
14 Credits

Spring 1st Year

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 •
- HORT 20100 - Plant Propagation Credits: 3.00
- SFS 21000 - Small Farm Experience I Credits: 3.00 or
- SFS 21100 - Small Farm Experience II Credits: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

15-16 Credits

Fall 2nd Year

- CHM 25700 - Organic Chemistry Credits: 4.00 •
- MGMT 20000 - Introductory Accounting Credits: 3.00 or
- MGMT 21200 - Business Accounting Credits: 3.00
- Horticulture Production & Marketing Concentration Selectives - Credit Hours: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Science, Technology, & Society Selective - Credit Hours: 1.00

14 Credits

Spring 2nd Year

- AGRY 25500 - Soil Science Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 30100 - Plant Physiology Credits: 4.00
- Horticulture Production & Marketing Concentration Selectives - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00

14 Credits

Fall 3rd Year

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- Entomology Selective - Credit Hours: 3.00
- Horticulture Production & Marketing Concentration Selectives - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Spring 3rd Year
• AGRY 32000 - Genetics Credits: 3.00
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
• HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 - Must take for 3.00 credits
• Statistics Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Fall 4th Year

• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00
• HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
• HORT 51300 - Nutrition Of Horticulture Crops Credits: 1.00
• Humanities or Social Sciences Selective - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

16 Credits

Spring 4th Year

• HORT 43500 - Developing An Agricultural Startup Credits: 4.00
• Horticulture Production & Marketing Concentration Selectives - Credit Hours: 3.00
• Humanities or Social Sciences Selective (30000+ level) - Credit Hours: 3.00
• Electives - Credit Hours: 3.00
• Electives - Credit Hours: 3.00-4.00

16-17 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be
proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Horticulture: Landscape Contracting and Management Concentration, BS

About the Program

Students selecting landscape contracting and management are prepared to direct in "hands-on" fashion, the technical side of landscape construction and plant installation. Graduates of this program often operate a landscape contracting business, a design/build company or a landscape management firm, or they may work as a grounds manager.

Horticulture Website

Horticulture Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (81 credits)

Required Major Courses (17 credits)

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 20100 - Plant Propagation Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 Must take for 3.00 credits

Landscape Contracting and Management Concentration Required Courses (55 credits)

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• ASM 21600 - Introduction To Surveying Credits: 1.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00
• HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
• HORT 21700 - Woody Landscape Plants Credits: 4.00
• HORT 21810 - Flowers For Color Credits: 1.00
• HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
• HORT 31700 - Landscape Contracting And Management Credits: 3.00
• HORT 43500 - Developing An Agricultural Startup Credits: 4.00
• LA 10110 - Survey Of Landscape Architecture Credits: 2.00
• LA 11600 - Graphic Communication In Design I Credits: 3.00
• LA 16100 - Land And Society Credits: 1.00 (satisfies Science, Technology and Society for core)
• LA 21600 - Studio I: Foundational Design Credits: 3.00
• LA 24600 - Site Engineering: Earthwork And Stormwater Credits: 4.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core)
• SPAN 10100 - Spanish Level I Credits: 3.00 (satisfies Human Cultures: Humanities for core)
• SPAN 10200 - Spanish Level II Credits: 3.00
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
  Entomology Selective - Credit Hours: 3.00
• ENTM 20600 - General Entomology Credits: 2.00 and
• ENTM 20700 - General Entomology Laboratory Credits: 1.00 OR
• ENTM 41000 - Applied Insect Biology Credits: 2.00 and
• ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00

Landscape Contracting and Management Concentration Selective Courses (9 credits)

• Horticulture Supervision/Personnel Selective - Credit Hours: 3.00 (see Horticulture Supplemental Information)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

Other Departmental/Program Course Requirements (36-37 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
• AGRY 25500 - Soil Science Credits: 3.00
• AGRY 32000 - Genetics Credits: 3.00
• BTNY 11000 - Introduction To Plant Science Credits: 4.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core)
• CHM 25700 - Organic Chemistry Credits: 4.00
  Statistics Selective - Credit Hours: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core) or
- STAT 50300 - Statistical Methods For Biology Credits: 3.00 or
- STAT 51100 - Statistical Methods Credits: 3.00 or
- STAT 51200 - Applied Regression Analysis Credits: 3.00
- Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (1-2 credits)

- Elective - Credit Hours: 2.00-3.00

Supplemental List

- Horticulture Supplemental Information

Internship/Work Experience Requirement

A minimum of 320 hours of post-high school work experience related to the major/concentration is required for a College of Agriculture baccalaureate of science degree from the Department of Horticulture and Landscape Architecture. Summer work, intra-semester jobs, or internships can be used to satisfy this requirement. Contact your academic advisor to learn more about the requirement and how to document your hours. The completed employment verification is required at least one semester before the student's intended graduation term.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.
GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
• Human Cultures: Humanities (HUM)
• Information Literacy (IL)
• Oral Communication (OC)
• Quantitative Reasoning (QR)
• Science #1 (SCI)
• Science #2 (SCI)
• Science, Technology, and Society (STS)
• Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
• BTNY 11000 - Introduction To Plant Science Credits: 4.00
- CHM 11100 - General Chemistry Credits: 3.00
- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- LA 10110 - Survey Of Landscape Architecture Credits: 2.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00
- Oral Communication Selective - Credit Hours: 3.00

19 Credits

Spring 1st Year

- CHM 11200 - General Chemistry Credits: 3.00
- HORT 20100 - Plant Propagation Credits: 3.00
- SPAN 10100 - Spanish Level I Credits: 3.00
- Economics Selective - Credit Hours: 3.00
- Written Communication Selective - Credit Hours: 3.00

15-16 Credits

Fall 2nd Year

- CHM 25700 - Organic Chemistry Credits: 4.00
- HORT 21700 - Woody Landscape Plants Credits: 4.00
- LA 11600 - Graphic Communication In Design I Credits: 3.00
- LA 16100 - Land And Society Credits: 1.00
- SPAN 10200 - Spanish Level II Credits: 3.00

15 Credits

Spring 2nd Year

- AGRY 25500 - Soil Science Credits: 3.00
- ASM 21600 - Introduction To Surveying Credits: 1.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 30100 - Plant Physiology Credits: 4.00
- LA 21600 - Studio I: Foundational Design Credits: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Fall 3rd Year

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- HORT 21810 - Flowers For Color Credits: 1.00
- HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
- LA 24600 - Site Engineering: Earthwork And Stormwater Credits: 4.00
  Entomology Selective - Credit Hours: 3.00
• ENTM 20600 - General Entomology Credits: 2.00 and
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
OR
• ENTM 41000 - Applied Insect Biology Credits: 2.00 and
• ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00

16 Credits

Spring 3rd year

• AGRY 32000 - Genetics Credits: 3.00
• HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
• HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 - Must take for 3.00 credits
• Statistics Selective - Credit Hours: 3.00

12 Credits

Fall 4th Year

• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00
• HORT 31700 - Landscape Contracting And Management Credits: 3.00
• HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
• Humanities or Social Science - Credit Hours: 3.00

15 Credits

Spring 4th Year

• HORT 43500 - Developing An Agricultural Startup Credits: 4.00
• Horticulture Supervision/Personnel Selective - Credit Hours: 3.00
• Humanities or Social Science (30000+ level) Selective - Credit Hours: 3.00
• Elective - Credit Hours: 2.00-3.00

12-13 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)
Critical Course

The ♦ course is considered critical.

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Horticulture: Landscape Design Concentration, BS

About the Program

Graduates in Landscape Design will be ready to create planting plans and construction site plans for landscape and garden development. They will be able to work with clients to determine requirements and oversee installation of new landscapes, especially at the small commercial/institutional and residential scales.

Horticulture Website

Horticulture Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (81 credits)

Required Major Courses (17 credits)

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 20100 - Plant Propagation Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- HORT 31900 - Controlled Environment Production Of Horticultural Crops Credits: 3.00
- HORT 42700 - Horticulture Capstone Credits: 1.00
Landscape Design Concentration Required Courses (49 credits)

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 21700 - Woody Landscape Plants Credits: 4.00
- HORT 21810 - Flowers For Color Credits: 1.00
- HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
- HORT 31700 - Landscape Contracting And Management Credits: 3.00
- HORT 43500 - Developing An Agricultural Startup Credits: 4.00
- LA 10110 - Survey Of Landscape Architecture Credits: 2.00
- LA 11600 - Graphic Communication In Design I Credits: 3.00
- LA 16100 - Land And Society Credits: 1.00 (satisfies Science, Technology and Society for core)
- LA 21600 - Studio I: Foundational Design Credits: 3.00
- LA 22700 - Planting I: Creating Ecologically Connected Landscapes Credits: 3.00
- LA 24600 - Site Engineering: Earthwork And Stormwater Credits: 4.00
- LA 32500 - Ecological Landscape Performance And Planting Credits: 3.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core)
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
- AGEC 21700 - Economics Credits: 3.00
- ECON 21000 - Principles Of Economics Credits: 3.00
- ECON 25100 - Microeconomics Credits: 3.00
- ECON 25200 - Macroeconomics Credits: 3.00
  Entomology Selective - Credit Hours: 3.00
- ENTM 20600 - General Entomology Credits: 2.00 and
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
  OR
- ENTM 41000 - Applied Insect Biology Credits: 2.00 and
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00 or
- ENTM 41002 - Insects Of Agricultural Crops Credits: 1.00

Landscape Design Concentration Selective Courses (15 credits)

- Horticulture Supervision/Personnel Selective - Credit Hours: 3.00 (see Horticulture Supplemental Information)
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

Other Departmental/Program Course Requirements (36-37 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 32000 - Genetics Credits: 3.00
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfied Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfied Science #2 for core)
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦

Statistics Selective - Credit Hours: 3.00

• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core) or
• STAT 50300 - Statistical Methods For Biology Credits: 3.00 or
• STAT 51100 - Statistical Methods Credits: 3.00 or
• STAT 51200 - Applied Regression Analysis Credits: 3.00

Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)

Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)

Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (2-3 credits)

• Electives - Credit Hours: 2.00-3.00

Supplemental List

• Horticulture Supplemental Information

Internship/Work Experience Requirement

A minimum of 320 hours of post-high school work experience related to the major/concentration is required for a College of Agriculture baccalaureate of science degree from the Department of Horticulture and Landscape Architecture. Summer work, intra-semester jobs, or internships can be used to satisfy this requirement. Contact your academic advisor to learn more about the requirement and how to document your hours. The completed employment verification is required at least one semester before the student's intended graduation term

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy
Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost’s Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦
• HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
• Oral Communication Selective - Credit Hours: 3.00

14 Credits

Spring 1st Year

• CHM 11200 - General Chemistry Credits: 3.00 ♦
• HORT 11000 - Opportunities In Horticulture Credits: 1.00
• HORT 20100 - Plant Propagation Credits: 3.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

16-17 Credits

Fall 2nd Year

• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• HORT 21700 - Woody Landscape Plants Credits: 4.00
• LA 11600 - Graphic Communication In Design I Credits: 3.00
• LA 16100 - Land And Society Credits: 1.00
• LA 10110 - Survey Of Landscape Architecture Credits: 2.00

14 Credits

Spring 2nd Year

• AGRY 25500 - Soil Science Credits: 3.00 ♦
• HORT 30100 - Plant Physiology Credits: 4.00
• LA 21600 - Studio I: Foundational Design Credits: 3.00
  Economics Selective - Credit Hours: 3.00
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

16 Credits

Fall 3rd Year
• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• HORT 21810 - Flowers For Color Credits: 1.00
• HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
• LA 24600 - Site Engineering: Earthwork And Stormwater Credits: 4.00
• Humanities or Social Sciences Selective - Credit Hours: 3.00

16 Credits

Spring 3rd Year

• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGRY 32000 - Genetics Credits: 3.00
• LA 22700 - Planting I: Creating Ecologically Connected Landscapes Credits: 3.00
  Statistics Selective - Credit Hours: 3.00
  • STAT 30100 - Elementary Statistical Methods Credits: 3.00 or
  • STAT 50300 - Statistical Methods For Biology Credits: 3.00 or
  • STAT 51100 - Statistical Methods Credits: 3.00 or
  • STAT 51200 - Applied Regression Analysis Credits: 3.00
  Entomology Selective - Credit Hours: 3.00
  • ENTM 20600 - General Entomology Credits: 2.00 and
  • ENTM 20700 - General Entomology Laboratory Credits: 1.00
  OR
  • ENTM 41000 - Applied Insect Biology Credits: 2.00 and
  • ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00 or
  • ENTM 41002 - Insects Of Agricultural Crops Credits: 1.00

15 Credits

Fall 4th Year

• HORT 31700 - Landscape Contracting And Management Credits: 3.00
• HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
• HORT 43500 - Developing An Agricultural Startup Credits: 4.00
• LA 32500 - Ecological Landscape Performance And Planting Credits: 3.00
• Written or Oral Communication (20000+ level) - Credit Hours: 3.00

16 Credits

Spring 4th Year

• HORT 31900 - Controlled Environment Production Of Horticultural Crops Credits: 3.00
• HORT 42700 - Horticulture Capstone Credits: 1.00
• Horticulture Supervision/Personnel Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Elective - Credit Hours: 2.00-3.00

12-13 Credits
Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

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In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Horticulture: Landscape Enterprise Management Concentration, BS

About the Program

In addition to their science-based landscape horticultural skills, students selecting landscape enterprise management are prepared to become account managers in client relations, business managers, as well as supervisors for landscape installation projects and landscape management.

Horticulture Website

Horticulture Major Change (CODO) Requirements

Degree Requirements

120 Credits Required
Departmental/Program Major Courses (76 credits)

Required Major Courses (17 credits)

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 20100 - Plant Propagation Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 Must take for 3.00 credits

Required Concentration Courses (35 credits)

- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- HORT 21700 - Woody Landscape Plants Credits: 4.00
- HORT 21810 - Flowers For Color Credits: 1.00
- HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
- HORT 31700 - Landscape Contracting And Management Credits: 3.00
- HORT 43500 - Developing An Agricultural Startup Credits: 4.00
- LA 10110 - Survey Of Landscape Architecture Credits: 2.00
- LA 16100 - Land And Society Credits: 1.00 (satisfies Science, Technology & Society Selective for core)
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core)
- MGMT 21200 - Business Accounting Credits: 3.00
  Entomology Selective - Credit Hours: 3.00
  - ENTM 20600 - General Entomology Credits: 2.00 and
  - ENTM 20700 - General Entomology Laboratory Credits: 1.00
  OR
  - ENTM 41000 - Applied Insect Biology Credits: 2.00 and
  - ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00 or
  - ENTM 41002 - Insects Of Agricultural Crops Credits: 1.00

Landscape Enterprise Management Concentration Selectives (24 credits)

- Horticulture Business/Supervision/Personnel Selective - Credit Hours: 12.00 (see Horticulture Supplemental Information )
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

Other Departmental/Program Course Requirements (36-37 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- AGRY 25500 - Soil Science Credits: 3.00 ♦
- AGRY 32000 - Genetics Credits: 3.00
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• Statistics Selective - Credit Hours: 3.00
  • STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core) or
  • STAT 50300 - Statistical Methods For Biology Credits: 3.00 or
  • STAT 51100 - Statistical Methods Credits: 3.00 or
  • STAT 51200 - Applied Regression Analysis Credits: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00–4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (7-8 credits)

• Elective - Credit Hours: 6.00-7.00

Supplemental List

• Horticulture Supplemental Information

Internship/Work Experience Requirement

A minimum of 320 hours of post-high school work experience related to the major/concentration is required for a College of Agriculture baccalaureate of science degree from the Department of Horticulture and Landscape Architecture. Summer work, intra-semester jobs, or internships can be used to satisfy this requirement. Contact your academic advisor to learn more about the requirement and how to document your hours. The completed employment verification is required at least one semester before the student's intended graduation term.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy
Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan
Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦
- CHM 11100 - General Chemistry Credits: 3.00 ♦
- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- LA 10110 - Survey Of Landscape Architecture Credits: 2.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00

16 Credits

Spring 1st Year

- AGE 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
- CHM 11200 - General Chemistry Credits: 3.00 ♦
- HORT 20100 - Plant Propagation Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Written Communication Selective - Credit Hours: 3.00-4.00

15-16 Credits

Fall 2nd Year

- CHM 25700 - Organic Chemistry Credits: 4.00 ♦
- HORT 21700 - Woody Landscape Plants Credits: 4.00
- LA 16100 - Land And Society Credits: 1.00
- MGMT 21200 - Business Accounting Credits: 3.00
  Humanities or Social Sciences Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

- AGRY 25500 - Soil Science Credits: 3.00 ♦
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 30100 - Plant Physiology Credits: 4.00
- Horticulture Business/Supervision/Personnel Selective - Credit Hours: 3.00
- Oral Communication Selective - Credit Hours: 3.00

14 Credits

Fall 3rd Year

- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00 ♦
- HORT 21810 - Flowers For Color Credits: 1.00
- HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
- Entomology Selective - Credit Hours: 3.00
- Horticulture Business/Supervision/Personnel Selective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

- AGRY 32000 - Genetics Credits: 3.00
- HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 - Must take for 3.00 credits
- Elective - Credit Hours: 3.00
- Statistics Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Fall 4th Year

- AGE 33100 - Principles Of Industrial Selling Credits: 3.00
- HORT 31700 - Landscape Contracting And Management Credits: 3.00
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- Humanities or Social Sciences Selective - Credit Hours: 3.00
- Horticulture Business/Supervision/Personnel Selective - Credit Hours: 3.00

15 Credits

Spring 4th Year

- HORT 43500 - Developing An Agricultural Startup Credits: 4.00
- Horticulture Business/Supervision/Personnel Selective - Credit Hours: 3.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Elective - Credit Hours: 4.00-5.00

14-15 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)
Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Horticulture: Plant Science Concentration, BS

About the Program

Plant Science includes training to improve plants through genetic manipulation and to investigate new methods of propagation, growth, handling, and marketing of horticultural crops. Horticultural scientists work at colleges and universities, state and federal experiment stations, and public or private laboratories and foundations. This curriculum prepares students for scientifically oriented careers such as technicians in plant breeding, propagation, and research industries. It is an excellent preparatory program for students planning to pursue post-graduate study toward a Masters or PhD degree.

Horticulture Website

Horticulture Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (70-71 credits)

Required Major Courses (17 credits)

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 20100 - Plant Propagation Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
• HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 Must take for 3.00 credits

Plant Science Concentration Required Courses (29-30 credits)

• AGRY 32100 - Genetics Laboratory Credits: 1.00
• BCHM 30700 - Biochemistry Credits: 3.00 ♦
• BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00 ♦
• BTNY 30200 - Plant Ecology Credits: 3.00 ♦
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00 ♦
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00 ♦
• HORT 12100 - Medicine In The Garden Credits: 1.00 (satisfies Science, Technology and Society for core)
• HORT 42700 - Horticulture Capstone Credits: 1.00
• HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 - must take for 3.00 credits
• HORT 51300 - Nutrition Of Horticulture Crops Credits: 1.00
• MA 16010 - Applied Calculus I Credits: 3.00 (satisfies Quantitative Reasoning for core)
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
  Physics Selective - Credit Hours: 3.00-4.00
• PHYS 17200 - Modern Mechanics Credits: 4.00
• PHYS 21400 - The Nature Of Physics Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• PHYS 22100 - General Physics Credits: 4.00

Plant Science Concentration Selective Courses (24 credits)

• Plant Science Concentration Selective - Credit Hours: 12.00 (see Horticulture Supplemental Information )
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00

Other Departmental/Program Course Requirements (40-41 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
• AGRY 25500 - Soil Science Credits: 3.00 ♦
• AGRY 32000 - Genetics Credits: 3.00 ♦
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00 ♦
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
  Statistics Selective - Credit Hours: 3.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core) or
• STAT 50300 - Statistical Methods For Biology Credits: 3.00 or
• STAT 51100 - Statistical Methods Credits: 3.00 or
• STAT 51200 - Applied Regression Analysis Credits: 3.00
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

Electives (8-10 credits)

• Elective - Credit Hours: 8.00-10.00

Supplemental List

• Horticulture Supplemental Information

Internship/Work Experience Requirement

A minimum of 320 hours of post-high school work experience related to the major/concentration is required for a College of Agriculture baccalaureate of science degree from the Department of Horticulture and Landscape Architecture. Summer work, intra-semester jobs, or internships can be used to satisfy this requirement. Contact your academic advisor to learn more about the requirement and how to document your hours. The completed employment verification is required at least one semester before the student's intended graduation term.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.
GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦
• HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
• MA 16010 - Applied Calculus I Credits: 3.00

14 Credits

Spring 1st Year

• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦
• HORT 20100 - Plant Propagation Credits: 3.00
• Economics Selective - Credit Hours: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

16-17 Credits

Fall 2nd Year

• BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00 ♦
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00 ♦
• HORT 12100 - Medicine In The Garden Credits: 1.00
   Humanities or Social Science Selective - Credit Hours: 3.00
   Plant Science Concentration Selective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

• AGRY 25500 - Soil Science Credits: 3.00
• BCHM 30700 - Biochemistry Credits: 3.00 ♦
• HORT 11000 - Opportunities In Horticulture Credits: 1.00 ♦
• HORT 30100 - Plant Physiology Credits: 4.00
• Oral Communication Selective - Credit Hours: 3.00

14 Credits

Fall 3rd Year

• BTNY 30100 - Introductory Plant Pathology Credits: 3.00 ♦
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Physics Selective - Credit Hours: 3.00-4.00
• Plant Science Concentration Selective - Credit Hours: 3.00

15-16 Credits
Spring 3rd Year

- AGRY 32000 - Genetics Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- BTNY 30200 - Plant Ecology Credits: 3.00
- HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 - Must take for 3.00 credits
- Statistics Selective - Credit Hours: 3.00
- Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

16 Credits

Fall 4th Year

- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- HORT 51300 - Nutrition Of Horticulture Crops Credits: 1.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Elective - Credit Hours: 4.00
- Plant Science Concentration Selective - Credit Hours: 3.00

14 Credits

Spring 4th Year

- HORT 42700 - Horticulture Capstone Credits: 1.00
- HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00
- Humanities or Social Sciences Selective (30000+ level) - Credit Hours: 3.00
- Plant Science Concentration Selective - Credit Hours: 3.00
- Elective - Credit Hours: 4.00-6.00

14-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.
In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

**Horticulture: Public Horticulture Concentration, BS**

**About the Program**

Public horticulture is a professional program leading to employment in botanical gardens and arboretums and other horticultural establishments serving the public. Graduates work as curators of plant collections, educators, plant propagators, illustrators, and writers. Practical training through internships in public gardens is stressed.

Horticulture Website

Horticulture Major Change (CODO) Requirements

**Degree Requirements**

**120 Credits Required**

**Departmental/Program Major Courses (73 credits)**

**Required Major Courses (17 credits)**

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 20100 - Plant Propagation Credits: 3.00
- HORT 30100 - Plant Physiology Credits: 4.00
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 Must take for 3 credits.

**Public Horticulture Concentration Required Courses (38 credits)**
• BCHM 30700 - Biochemistry Credits: 3.00 ♦
• BTNY 30200 - Plant Ecology Credits: 3.00 ♦
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00 ♦
• HORT 21700 - Woody Landscape Plants Credits: 4.00
• HORT 21810 - Flowers For Color Credits: 1.00
• HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
• HORT 30600 - History Of Horticulture Credits: 3.00
• HORT 31700 - Landscape Contracting And Management Credits: 3.00
• HORT 42700 - Horticulture Capstone Credits: 1.00
• LA 10110 - Survey Of Landscape Architecture Credits: 2.00
• LA 16100 - Land And Society Credits: 1.00 (satisfies Science, Technology and Society for core)
• LA 16600 - History And Theory Of Landscape Architecture Credits: 3.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core)

**Economics Selective** - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Sciences for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00

**Entomology Selective** - Credit Hours: 3.00
• ENTM 20600 - General Entomology Credits: 2.00 and
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
OR
• ENTM 41000 - Applied Insect Biology Credits: 2.00
and
• ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00 or
• ENTM 41002 - Insects Of Agricultural Crops Credits: 1.00

**Public Horticulture Concentration Selective Courses (18 credits)**

• Public Horticulture Concentration Selectives - Credit Hours: 3.00 (see Horticulture Supplemental Information)
• Horticulture Communications Selective - Credit Hours: 3.00
• Horticulture Supervision/Personnel Selective - Credit Hours: 3.00
• Human Cultures Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

**Other Departmental /Program Course Requirements (40-41 credits)**

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
• AGRY 25500 - Soil Science Credits: 3.00 ♦
• AGRY 32000 - Genetics Credits: 3.00
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00 ♦  
• CHM 11100 - General Chemistry Credits: 3.00 ♦ (satisfies Science #1 for core)  
• CHM 11200 - General Chemistry Credits: 3.00 ♦ (satisfies Science #2 for core)  
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦  
  Statistics Selective - Credit Hours: 3.00  
• STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core) or  
• STAT 50300 - Statistical Methods For Biology Credits: 3.00 or  
• STAT 51100 - Statistical Methods Credits: 3.00 or  
• STAT 51200 - Applied Regression Analysis Credits: 3.00  
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)  
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)  
• Written or Oral Communication Selective (20000+ level)- Credit Hours: 3.00

Electives (6-7 credits)

• Elective - Credit Hours: 6.00-7.00

Supplemental List

• Horticulture Supplemental Information

Internship/Work Experience Requirement

A minimum of 800 hours of post-high school, public horticulture-related internship experience is required. Public Horticulture is a professional program leading to employment in botanical gardens, arboretums, and other horticulture establishments in the public sector, as curators of plant collections, educators, plant propagators, illustrators, and writers. Summer or intra-semester internships can be used to satisfy this requirement. Contact your academic advisor with any questions about this requirement. Contact your academic advisor to learn how to document your hours. The completed employment verification is required at least one semester before the student's intended graduation term.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)  

• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00  

• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00  

• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00  

• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy
Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year
• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00 ♦
• HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00

14 Credits

Spring 1st Year

• BTNY 12100 - Principles Of Plant Biology II Credits: 4.00
• CHM 11200 - General Chemistry Credits: 3.00 ♦
• HORT 20100 - Plant Propagation Credits: 3.00
• Economics Selective - Credit Hours: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

16-17 Credits

Fall 2nd Year

• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• HORT 21700 - Woody Landscape Plants Credits: 4.00
• LA 10110 - Survey Of Landscape Architecture Credits: 2.00
• LA 16100 - Land And Society Credits: 1.00
• Humanities or Social Sciences Selective - Credit Hours: 3.00

14 Credits

Spring 2nd Year

• AGRY 25500 - Soil Science Credits: 3.00
• BCHM 30700 - Biochemistry Credits: 3.00 ♦
• HORT 11000 - Opportunities In Horticulture Credits: 1.00
• HORT 30100 - Plant Physiology Credits: 4.00
• Oral Communication Selective - Credit Hours: 3.00
• Elective - Credit Hours: 1.00

15 Credits

Fall 3rd Year

• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00 ♦
• HORT 21810 - Flowers For Color Credits: 1.00
• HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
• Entomology Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00

15 Credits

Spring 3rd Year

• AGRY 32000 - Genetics Credits: 3.00
• BTNY 30200 - Plant Ecology Credits: 3.00
• Statistics Selective - Credit Hours: 3.00
• Horticulture Supervision/Personnel Selective - Credit Hours: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

15 Credits

Fall 4th Year

• HORT 31700 - Landscape Contracting And Management Credits: 3.00
• HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Public Horticulture Communication Selective - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

15 Credits

Spring 4th Year

• HORT 30600 - History Of Horticulture Credits: 3.00
• HORT 42700 - Horticulture Capstone Credits: 1.00
• HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00
• LA 16600 - History And Theory Of Landscape Architecture Credits: 3.00
• Public Horticulture Concentration Selective - Credit Hours: 3.00
• Elective - Credit Hours: 2.00-3.00

15-16 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)
Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Sustainable Food and Farming Systems, BS

About the Program

Learn how to design and manage a small farm enterprise. Study the principles of sustainable agriculture including non-chemical pest and soil management. Investigate organic, local, and urban agriculture systems and study the resilience of the American food system. Gain hands-on experience at the new Purdue University student farm. This is a comprehensive, science-based degree program that will prepare you to manage low-input farming enterprises and for a career in many other agricultural and environmental professional fields.

Sustainable Food and Farming Systems Website

Sustainable Food and Farming Systems Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Departmental/Program Major Courses (28 credits)

Required Major Courses (14 credits)

- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- SFS 21000 - Small Farm Experience I Credits: 3.00 ♦
- SFS 21100 - Small Farm Experience II Credits: 3.00 ♦
- SFS 30100 - Agroecology Credits: 3.00
- SFS 30200 - Principles Of Sustainability Credits: 3.00
• SFS 35100 - SFS Capstone Project **Credits:** 1.00

**Major Selectives (15 credits)**

(see Supplemental Information for lists of courses)

**Ecology/Environment Selective - Credit Hours: 3.00**

**Pest Management Selectives - Credit Hours: 6.00**

**Systems Modules Selective - Credit Hours: 6.00**

**Other Departmental/Program Course Requirements (70-71 credits)**

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University **Credits:** 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs **Credits:** 0.50
- AGRY 25500 - Soil Science **Credits:** 3.00
- AGRY 32000 - Genetics **Credits:** 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness **Credits:** 3.00 (satisfies Human Culture Behavioral/Social Science for core) or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy **Credits:** 3.00 (satisfies Human Culture Behavioral/Social Science for core)
- ANSC 10200 - Introduction To Animal Agriculture **Credits:** 3.00 (satisfies Science, Technology, and Society for core) or
- ANSC 24000 - Principles Of Animal Production **Credits:** 3.00 (DOES NOT satisfies Science, Technology, and Society for core)

**Biological Selective I and II - (Choose 2 of the 3 courses) Credit Hours: 8.00**

- BIOL 11000 - Fundamentals Of Biology I **Credits:** 4.00
- BTNY 11000 - Introduction To Plant Science **Credits:** 4.00
- BTNY 12000 - Principles Of Plant Biology I **Credits:** 4.00
- BTNY 20700 - The Microbial World **Credits:** 3.00 or
- BIOL 22100 - Introduction To Microbiology **Credits:** 4.00
- CHM 11100 - General Chemistry **Credits:** 3.00 (satisfies Science #1 for core)
- CHM 11200 - General Chemistry **Credits:** 3.00 (satisfies Science #2 for core)
- HORT 10100 - Fundamentals Of Horticulture **Credits:** 3.00
- HORT 43500 - Developing An Agricultural Startup **Credits:** 4.00
- MA 15800 - Precalculus - Functions And Trigonometry **Credits:** 3.00 (satisfies Quantitative Reasoning for core)
- SFS 48500 - Environmental Communication **Credits:** 3.00
- STAT 30100 - Elementary Statistical Methods **Credits:** 3.00 (satisfies Information Literacy for core)
  
  Horticulture Selective - Credit Hours: 3.00
- HORT 20100 - Plant Propagation **Credits:** 3.00
- HORT 31800 - Field Production Of Horticultural Crops **Credits:** 3.00
- HORT 49100 - Special Assignments In Horticulture **Credits:** 1.00 to 3.00 Must take for 3.00 credits

**Soil Science Selective - Credit Hours: 3.00**

- AGRY 34900 - Soil Ecology **Credits:** 3.00
- AGRY 36500 - Soil Fertility **Credits:** 3.00
- AGRY 45000 - Soil Conservation and Water Management **Credits:** 3.00
- AGRY 56500 - Soils And Landscapes **Credits:** 3.00
- AGRY 58000 - Soil And Rhizosphere Microbiology **Credits:** 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
Electives (21-22 credits)

- Elective - Credit Hours: 20.00-21.00

Supplemental List

- Sustainable Food & Farming Systems Supplemental Information

Internship/Work Experience Requirement

A minimum of 320 hours of post-high school work experience related to the major/concentration is required for a College of Agriculture baccalaureate of science degree from the Department of Horticulture and Landscape Architecture. Summer work, intra-semester jobs, or internships can be used to satisfy this requirement. Contact your academic advisor to learn more about the requirement and how to document your hours. The completed employment verification is required at least one semester before the student's intended graduation term.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements
2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
  Biological Selective I (Choose one) - Credit Hours: 4.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
• BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00
• Oral Communication Selective - Credit Hours: 3.00

14 Credits

Spring 1st Year

   Biological Selective II - (Choose one) Credit Hours: 4.00
   • BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
   • BTNY 11000 - Introduction To Plant Science Credits: 4.00
   • BTNY 12000 - Principles Of Plant Biology I Credits: 4.00
   • CHM 11200 - General Chemistry Credits: 3.00
   • HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
   • SFS 21000 - Small Farm Experience I Credits: 3.00 ♦
   • Written Communication Selective - Credit Hours: 3.00-4.00

16-17 Credits

Fall 2nd Year

• ANSC 10200 - Introduction To Animal Agriculture Credits: 3.00 or
• ANSC 24000 - Principles Of Animal Production Credits: 3.00
• SFS 21100 - Small Farm Experience II Credits: 3.00 ♦
• SFS 30100 - Agroecology Credits: 3.00
• Systems Modules Selective - Credit Hours: 3.00
• Elective - Credit Hours: 3.00

15 Credits

Spring 2nd Year

• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGRY 25500 - Soil Science Credits: 3.00
• HORT 11000 - Opportunities In Horticulture Credits: 1.00
• SFS 30200 - Principles Of Sustainability Credits: 3.00
• BTNY 20700 - The Microbial World Credits: 3.00 or
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• Systems Modules Selective - Credit Hours: 3.00

16-17 Credits
Fall 3rd Year

- SFS 48500 - Environmental Communication Credits: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00
- Pest Management Selective - Credit Hours: 3.00

  Soil Science Selective (Choose one) - Credit Hours: 3.00
  - AGRY 34900 - Soil Ecology Credits: 3.00
  - AGRY 36500 - Soil Fertility Credits: 3.00
  - AGRY 45000 - Soil Conservation and Water Management Credits: 3.00
  - AGRY 56500 - Soils And Landscapes Credits: 3.00
  - AGRY 58000 - Soil And Rhizosphere Microbiology Credits: 3.00

15 Credits

Spring 3rd Year

- AGRY 32000 - Genetics Credits: 3.00
- STAT 30100 - Elementary Statistical Methods Credits: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
- Elective - Credit Hours: 3.00

  Horticulture Selective (Choose one) - Credit Hours: 3.00
  - HORT 20100 - Plant Propagation Credits: 3.00
  - HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
  - HORT 31900 - Controlled Environment Production Of Horticultural Crops Credits: 3.00
  - HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00 Must take for 3.00 credits

15 Credits

Fall 4th Year

- HORT 43500 - Developing An Agricultural Startup Credits: 4.00
- SFS 35100 - SFS Capstone Project Credits: 1.00
- Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
- Pest Management Selective - Credit Hours: 3.00
- Elective - Credit Hours: 5.00

16 Credits

Spring 4th Year

- Ecology/Environment Selective - Credit Hours: 3.00
- Humanities or Social Science Selective - Credit Hours: 3.00
Elective - Credit Hours: 7.00-8.00

13-14 Credits

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

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Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Turf Management and Science, BS

About the Program

This major is for students interested in a career as a professional turf manager. A turf manager oversees and implements cultural management programs for the maintenance, production, conditioning and performance of a wide variety of turf areas like lawns, athletic fields, golf courses, parks, and sod farms. Managing a visually pleasing and manicured turf that is subject to intense use requires a foundation of technical expertise, the ability to make precise management decisions and a wealth of practical experience. The Turf Science and Management curriculum is based in scientific principles, while also providing the technical information, business/management, written/oral communication, and problem solving coursework and skills to promote managerial success. This Bachelor of Science degree broadly prepares students to handle a wide array of potential career paths in the Turf Industry.
Degree Requirements

120 Credits Required

Departmental/Program Major Courses (40 credits)

Required Major Courses (19 credits)

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
- HORT 21100 - Fundamentals Of Turfgrass Culture Laboratory Credits: 1.00
- HORT 30100 - Plant Physiology Credits: 4.00
- AGRY 51000 - Turfgrass Science Credits: 3.00
- AGRY 51200 - Integrated Turfgrass Systems Credits: 3.00
- AGRY 51400 - Environmental Stress Management For Turfgrass Credits: 1.00 or
- HORT 51300 - Nutrition Of Horticulture Crops Credits: 1.00

Major Selectives (21 credits)

- Business/Management Selectives - Credit Hours: 9.00
- Turf Science Selectives - Credit hours: 12.00 - See Turf Management and Science Supplemental Information

Other Departmental/Program Course Requirements (73-75 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- BTNY 30100 - Introductory Plant Pathology Credits: 3.00
- BTNY 30400 - Introductory Weed Science Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00 (satisfies Science #1 for core)
- CHM 11200 - General Chemistry Credits: 3.00 (satisfies Science #2 for core)
- CHM 25700 - Organic Chemistry Credits: 4.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning Selective for core)
- STAT 30100 - Elementary Statistical Methods Credits: 3.00 (satisfies Information Literacy for core)
- MGMT 21200 - Business Accounting Credits: 3.00 or
• MGMT 20000 - Introductory Accounting Credits: 3.00
  Physics Selective - Credit Hours: 3.00
• PHYS 21400 - The Nature Of Physics Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
  Economics Selective - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• ECON 21000 - Principles Of Economics Credits: 3.00
• ECON 25100 - Microeconomics Credits: 3.00
• ECON 25200 - Macroeconomics Credits: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Science, Technology, & Society Selective - Credit Hours: 1.00 (satisfies Science, Technology & Society for core)
• Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
• Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication for core)
• Written or Oral Communications Selective (20000+ level) - Credit Hours: 3.00

Electives (5-7 credits)

• Elective - Credit Hours: 5.00-7.00

Supplemental List

• Turf Management and Science Supplemental Information

Internship/Work Experience Requirement

A minimum of 320 hours of post-high school work experience related to the major/concentration is required for a College of Agriculture baccalaureate of science degree from the Department of Horticulture and Landscape Architecture. Summer work, intra-semester jobs, or internships can be used to satisfy this requirement. Contact your academic advisor to learn more about the requirement and how to document your hours. The completed employment verification is required at least one semester before the student's intended graduation term.

College of Agriculture & University Level Requirements

• College of Agriculture International Understanding Selective - Credit Hours: 9.00 (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)
• College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00
• College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00
• Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00
• College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00
College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

• Human Cultures: Behavioral/Social Science (BSS)
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Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency Website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

• Attending six approved civics-related events and completing an assessment for each; or
• Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
• Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

• Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
• Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Sample 4-Year Plan

Fall 1st Year

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
• BTNY 11000 - Introduction To Plant Science Credits: 4.00
• CHM 11100 - General Chemistry Credits: 3.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00
• Written Communication Selective - Credit Hours: 3.00-4.00

14-15 Credits

Spring 1st Year

• HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
• CHM 11200 - General Chemistry Credits: 3.00
• Economics Selective - Credit Hours: 3.00
• Oral Communication Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00

15 Credits

Fall 2nd Year

• AGRY 25500 - Soil Science Credits: 3.00 ♦
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• CHM 25700 - Organic Chemistry Credits: 4.00 ♦
• MGMT 21200 - Business Accounting Credits: 3.00 or
• MGMT 20000 - Introductory Accounting Credits: 3.00
• Written or Oral Communication Selective (20000+ level) - Credit Hours: 3.00

16 Credits

Spring 2nd Year

• AGRY 36500 - Soil Fertility Credits: 3.00 ♦
• HORT 11000 - Opportunities In Horticulture Credits: 1.00
• HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
• HORT 21100 - Fundamentals Of Turfgrass Culture Laboratory Credits: 1.00
• HORT 30100 - Plant Physiology Credits: 4.00
• STAT 30100 - Elementary Statistical Methods Credits: 3.00

15 Credits
Fall 3rd Year

- AGEC 33000 - Management Methods For Agricultural Business **Credits**: 3.00
- AGRY 51000 - Turfgrass Science **Credits**: 3.00
- BTNY 30400 - Introductory Weed Science **Credits**: 3.00
- ENTM 41000 - Applied Insect Biology **Credits**: 2.00
- ENTM 41001 - Insects Of Urban Landscapes **Credits**: 1.00
- Humanities or Social Sciences Selective - **Credit Hours**: 3.00

**15 Credits**

Spring 3rd Year

- AGEC 33100 - Principles Of Industrial Selling **Credits**: 3.00
  - **Physics Selective** - **Credit Hours**: 3.00
- PHYS 21400 - The Nature Of Physics **Credits**: 3.00 or
- PHYS 22000 - General Physics **Credits**: 4.00
- Turf Management Selective - **Credit Hours**: 3.00
- Turf Management Selective - **Credit Hours**: 3.00
- Humanities or Social Sciences Selective - **Credit Hours**: 3.00

**15-16 Credits**

Fall 4th Year

- AGRY 51200 - Integrated Turfgrass Systems **Credits**: 3.00
- AGRY 51400 - Environmental Stress Management For Turfgrass **Credits**: 1.00 or
- HORT 51300 - Nutrition Of Horticulture Crops **Credits**: 1.00
- Business/Management Selective - **Credit Hours**: 3.00
- Humanities or Social Sciences Selective (30000+ level) - **Credit Hours**: 3.00
- Turf Management Selective - **Credit Hours**: 3.00
- Elective - **Credit Hours**: 3.00

**16 Credits**

Spring 4th Year

- Business/Management Selective - **Credit Hours**: 3.00
- Business/Management Selective - **Credit Hours**: 3.00
- Turf Management Selective - **Credit Hours**: 3.00
- Science, Technology & Society Selective - **Credit Hours**: 1.00-3.00
- Electives - **Credit Hours**: 0.00-4.00

**12-14 Credits**
Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.

In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

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Bachelor of Science in Landscape Architecture

Landscape Architecture, BSLA

About the Program

Landscape architecture allows students to develop abilities in problem solving, analytical thinking, and communication. Three fundamental tracks run through the curriculum - design, technical, and plant materials. First-year students enter the pre-landscape architecture program and learn basic art, graphic communication, and design skills. Based on performance in their first year, qualified students are admitted into the professional landscape architecture program. In their second year, increasingly challenging projects allow students to apply their knowledge. Third-year students complete larger-scale projects and focus on
more diverse and technically difficult concepts. Between the third and fourth years, students complete a co-op program wherein students are placed in professional offices nationwide for a minimum of forty weeks. Fourth year students focus on "real-client" projects in urban and regional design.

Landscape Architecture Website

Horticulture Major Change (CODO) Requirements

Degree Requirements

120 Credits Required

Required Major Courses (60 credits)

• LA 10110 - Survey Of Landscape Architecture Credits: 2.00
• LA 11600 - Graphic Communication In Design I Credits: 3.00
• LA 11700 - Graphic Communication In Design II Credits: 3.00
• LA 16100 - Land And Society Credits: 1.00 (satisfies Science, Technology, & Society for core)
• LA 16600 - History And Theory Of Landscape Architecture Credits: 3.00
• LA 21600 - Studio I: Foundational Design Credits: 3.00
• LA 22600 - Studio II: Site Analysis And Design Credits: 4.00
• LA 22700 - Planting I: Creating Ecologically Connected Landscapes Credits: 3.00
• LA 24600 - Site Engineering: Earthwork And Stormwater Credits: 4.00
• LA 30900 - Co-Op Preparation Credits: 1.00
• LA 31600 - Studio IV: Park And Open Space Design Credits: 4.00
• LA 32500 - Ecological Landscape Performance And Planting Credits: 3.00
• LA 32600 - Studio V: Community Design And Planning Credits: 4.00
• LA 34600 - Site Systems II Credits: 3.00
• LA 35600 - Site Engineering: Construction Documents And Advanced Systems Credits: 4.00
• LA 39000 - Professional Cooperative Programs In Landscape Architecture Credits: 0.00
• LA 41600 - Studio VI: Urban Design Credits: 4.00
• LA 42600 - Studio VII: Landscape Architecture Capstone Credits: 4.00
• LA 47600 - Professional Practice Of Landscape Architecture Credits: 2.00
• LA 48200 - Contemporary Issues In Landscape Architecture Credits: 2.00
• LA 50100 - Research Methods For Design Applications Credits: 1.00
• Landscape Architecture Selectives - Credit Hours: 2.00

Other Departmental/Program Course Requirements (53-54 credits)

• AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
• AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
• ASM 21600 - Introduction To Surveying Credits: 1.00
• BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦
• HORT 21700 - Woody Landscape Plants Credits: 4.00
• HORT 31700 - Landscape Contracting And Management Credits: 3.00
• MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning Selective for core)
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
• FNR 12500 - Environmental Science And Conservation Credits: 3.00 ♦ or
• NRES 12500 - Environmental Science And Conservation Credits: 3.00 ♦
• BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
• BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦

Written Communication Selective - Credit Hours: 3.00-4.00 (satisfies Written Communication and Information Literacy for core)
• ENGL 10600 - First Year Composition With Conferences Credits: 4.00 ♦ or
• ENGL 10800 - First Year Composition Credits: 3.00 ♦

Oral Communication Selectives - Credit Hours: 3.00 (satisfies Oral Communication for core)
• COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 or
• COM 21700 - Science Writing And Presentation Credits: 3.00 or
• EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00 or
• SCLA 10200 - Transformative Texts, Critical Thinking And Communication II: Modern World Credits: 3.00

Economics Selective - Credit Hours: 3.00 (satisfies Human Culture Behavioral/Social Science for core)
• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
• AGEC 21700 - Economics Credits: 3.00 or
• ECON 21000 - Principles Of Economics Credits: 3.00 or
• ECON 25100 - Microeconomics Credits: 3.00 or
• ECON 25200 - Macroeconomics Credits: 3.00
• Art & Design Selective - Credit Hours: 3.00
• Art & Design Selective - Credit Hours: 3.00
• Mathematics or Sciences Selective - Credit Hours: 3.00
• Human Cultures: Humanities Selective - Credit Hours: 3.00
• Humanities or Social Science Selective - Credit Hours: 3.00
• Humanities or Social Science Selective (30000+ level) - Credit Hours: 3.00
• Written or Oral Communications Selection (20000+ level) - Credit Hours: 3.00

Electives (6-7 credits)
• Electives - Credit Hours: 6.00-7.00

Supplemental List

Click here for Landscape Architecture Supplemental Information

GPA Requirements

• 2.0 GPA required for Bachelor of Science degree.

Course Requirements and Notes

• ** Students in Landscape Architecture fulfill the foundational mathematics requirement by (1) completing MA 15800 or higher or (2) completing STAT 30100. Enrolling in STAT 30100 requires either successfully completing MA 15300 and MA 15400 or taking the advanced credit examination for MA 15300 and MA 15400 to establish competency. Three (3) credits of
MA 15300 or MA 15400 may be used as an unrestricted elective in the College of Agriculture Undergraduate plans of study, but may not be used as Mathematics and Sciences selective.

Non-course / Non-credit Requirements

Change of Option from Pre-landscape Architecture to the Professional Landscape Architecture Program

- Pre-landscape architecture students, who wish to continue into the landscape architecture professional program, or transfer students from other institutions, must qualify by meeting the following criteria, or through further assessment as described below:
  - 1. Overall GPA - The student must be in good academic standing. A minimum overall GPA of 2.5 across all Purdue and transferred credit coursework is necessary for acceptance into the landscape architecture professional program.
  - 2. Grade point average of 3.0 or higher in all landscape architecture prefixed courses taken (LA Index).
  - 3. Completion of LA 10600; or 11600 and 21600; or approved equivalent, and a minimum of 24 credit hours of Purdue accepted college level coursework are the minimum necessary for acceptance into the landscape architecture professional program.

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.

College of Agriculture & University Level Requirements

- College of Agriculture International Understanding Selective - Credit Hours: 9.00  (Agricultural Engineering, Biological Engineering, Environmental & Natural Resources Engineering - Credit Hours: 6.00)

- College of Agriculture Multicultural Awareness Selective - Credit Hours: 3.00

- College of Agriculture Humanities or Social Science Selectives (30000+ level) (30000+ level) - Credit Hours: 3.00

- Human Cultures: Humanities or Behavioral/Social Sciences Selective (Choose from outside the College of Agriculture) - Credit Hours: 9.00

- College of Agriculture Additional Written or Oral Communication Selectives - Credit Hours: 3.00

College of Agriculture Pass/No Pass Policy

College of Agriculture Undergraduate Pass/No Pass Policy

Transfer Credit Policy

Transfer courses listed in the Purdue Transfer Equivalency Guide with specific Purdue Subject codes (e.g. BIOL) may be used to fulfill degree requirements at the discretion of the College of Agriculture. However, Agriculture transfer courses listed with "UND" Purdue Subject codes cannot be used for any requirements in the College of Agriculture at Purdue.
GPA Requirements

- 2.0 GPA required for Bachelor of Science degree.

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Additional Information

*Any additional information that does not fit into any of the categories above.*

Sample 4-Year Plan
Fall 1st Year (Pre-Program)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00♦
- LA 10110 - Survey Of Landscape Architecture Credits: 2.00
- LA 11600 - Graphic Communication In Design I Credits: 3.00
- LA 16100 - Land And Society Credits: 1.00
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00♦ or
- ENGL 10800 - First Year Composition Credits: 3.00♦

14-15 Credits

Spring 1st Year (Pre-Program)

- LA 21600 - Studio I: Foundational Design Credits: 3.00
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00♦ or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00♦
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 or
- COM 21700 - Science Writing And Presentation Credits: 3.00 or
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00 or
- SCLA 10200 - Transformative Texts, Critical Thinking And Communication II: Modern World Credits: 3.00
- Art and Design Selective - Credit Hours: 3.00

16 Credits

Fall 2nd Year

- HORT 21700 - Woody Landscape Plants Credits: 4.00
- LA 11700 - Graphic Communication In Design II Credits: 3.00
- LA 24600 - Site Engineering: Earthwork And Stormwater Credits: 4.00
- AGRY 12500 - Environmental Science And Conservation Credits: 3.00♦ or
- EAPS 12500 - Environmental Science And Conservation Credits: 3.00♦ or
- FNR 12500 - Environmental Science And Conservation Credits: 3.00♦ or
- NRES 12500 - Environmental Science And Conservation Credits: 3.00♦
- Elective - Credit Hours: 1.00

15 Credits

Spring 2nd Year

- ASM 21600 - Introduction To Surveying Credits: 1.00
- LA 16600 - History And Theory Of Landscape Architecture Credits: 3.00
- LA 22600 - Studio II: Site Analysis And Design Credits: 4.00
- LA 22700 - Planting I: Creating Ecologically Connected Landscapes Credits: 3.00
- LA 34600 - Site Systems II Credits: 3.00
- Landscape Architecture Selective - Credit Hours: 1.00
15 Credits

Fall 3rd Year

- HORT 31700 - Landscape Contracting And Management Credits: 3.00
- LA 30900 - Co-Op Preparation Credits: 1.00
- LA 31600 - Studio IV: Park And Open Space Design Credits: 4.00
- LA 32500 - Ecological Landscape Performance And Planting Credits: 3.00
- Art & Design Selective - Credit Hours: 3.00

14 Credits

Spring 3rd Year

- LA 32600 - Studio V: Community Design And Planning Credits: 4.00
- LA 35600 - Site Engineering: Construction Documents And Advanced Systems Credits: 4.00
  Economics Selective - Credit Hours: 3.00
- AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00 or
- AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00 or
- AGEC 21700 - Economics Credits: 3.00 or
- ECON 21000 - Principles Of Economics Credits: 3.00 or
- ECON 25100 - Microeconomics Credits: 3.00 or
- ECON 25200 - Macroeconomics Credits: 3.00
- Landscape Architecture Selective - Credit Hours: 1.00
- Elective - Credit Hours: 4.00

16 Credits

Fall & Spring 4th Year

- LA 39000 - Professional Cooperative Programs In Landscape Architecture Credits: 0.00

Fall 5th Year

- LA 41600 - Studio VI: Urban Design Credits: 4.00
- LA 47600 - Professional Practice Of Landscape Architecture Credits: 2.00
- LA 50100 - Research Methods For Design Applications Credits: 1.00
- Humanities or Social Sciences Selective (30000+ level) - Credit Hours: 3.00
- Written or Oral Communications Selection (20000+ level) - Credit Hours: 3.00
- Mathematics or Sciences Selective - Credit Hours: 3.00

16 Credits

Spring 5th Year

- LA 42600 - Studio VII: Landscape Architecture Capstone Credits: 4.00
- LA 48200 - Contemporary Issues In Landscape Architecture Credits: 2.00
- Humanities or Social Sciences Selective - Credit Hours: 3.00
- Human Cultures: Humanities Selective - Credit Hours: 3.00
- Elective - Credit Hours: 1.00-2.00

**13-14 Credits**

**Pre-Requisite Information**

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**World Language Courses**

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**Critical Course**

The ♦ course is considered critical.

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**Certificate**

**Landscape Management and Turf Management Certificate**

**Requirements for the Certificate (23 credits)**

**Required Courses (23 credits)**

- AGRY 25500 - Soil Science Credits: 3.00
- CHM 11100 - General Chemistry Credits: 3.00
Notes

Required Certification in Pesticide Application: Complete certification requirement for an Indiana "For-Hire Pesticide Applicator License" in either category 3a Ornamental Pest Management, or 3b Turf Management. (Information available from the Office of the Indiana State Chemist - Pesticide Section)

REQUIRED PROFESSIONAL EXPERIENCE: Complete a minimum of 320 hours of work experience in turf and/or landscape horticulture.

Pre-Requisite Information

For pre-requisite information, log in to my purdue.purdue.edu and click here.

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Minor

Horticulture Minor

Requirements for the Minor (16 credits)

Required Courses (7 credits)

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 11000 - Opportunities In Horticulture Credits: 1.00
- HORT 20100 - Plant Propagation Credits: 3.00

Selective Courses (9 credits)

- HORT 21700 - Woody Landscape Plants Credits: 4.00
- HORT 21810 - Flowers For Color Credits: 1.00
- HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
• HORT 29100 - Selected Topics In Horticulture Credits: 1.00 to 3.00
• HORT 30100 - Plant Physiology Credits: 4.00
• HORT 30600 - History Of Horticulture Credits: 3.00
• HORT 31700 - Landscape Contracting And Management Credits: 3.00
• HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
• HORT 31900 - Controlled Environment Production Of Horticultural Crops Credits: 3.00
• HORT 37000 - Professional Floral Design Credits: 3.00
• HORT 40300 - Tropical Horticulture Credits: 3.00
• HORT 42700 - Horticulture Capstone Credits: 1.00
• HORT 43500 - Developing An Agricultural Startup Credits: 4.00
• HORT 45000 - In The English Landscape: Integrating History, Horticulture, And Landscape Architecture Credits: 3.00
• HORT 49100 - Special Assignments In Horticulture Credits: 1.00 to 3.00
• HORT 50600 - Commercial Grape And Wine Production Credits: 3.00
• HORT 51300 - Nutrition Of Horticulture Crops Credits: 1.00
• HORT 52500 - The Plant Microbiome Credits: 3.00
• HORT 54100 - Postharvest Technology Of Fruits And Vegetables Credits: 1.00
• HORT 55300 - Plant Growth And Development Credits: 3.00
• HORT 59000 - Special Studies In Horticulture Credits: 1.00 to 3.00
• SFS 21000 - Small Farm Experience I Credits: 3.00
• SFS 21100 - Small Farm Experience II Credits: 3.00

Note

• Departmental permission is not required to enroll in this minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Landscape and Turf Minor

Requirements for the Minor (13 Credits)

Required Courses (10 credits)

• HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
• HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
Landscape Management Minor

Requirements for the Minor (12-13 credits)

Required Courses (9-10 credits)

- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- HORT 31700 - Landscape Contracting And Management Credits: 3.00
  Plant Materials Selective
- HORT 21700 - Woody Landscape Plants Credits: 4.00 OR
- HORT 21810 - Flowers For Color Credits: 1.00 and
- HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00

Selective Course (3 credits)
HORT 20100 - Plant Propagation Credits: 3.00
HORT 21700 - Woody Landscape Plants Credits: 4.00 *
HORT 21810 - Flowers For Color Credits: 1.00 *
HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00 *
ENTM 41000 - Applied Insect Biology Credits: 2.00 and
ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00

Notes

- Departmental permission is not required to enroll in this minor.
- *HORT 21700, HORT 21810, and HORT 21820 can only be used as a selective, if not used as the Plant Materials course above.
- Students in the following majors/concentrations cannot obtain a Landscape Management Minor:
  - Horticulture/Landscape Enterprise Management
  - Horticulture/Landscape Contracting Management
  - Horticulture/Landscape Design
  - Horticulture/Landscape Horticulture and Design

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Sustainable Food and Farming Systems Minor

The Sustainable Food and Farming Systems minor offers a broad education in agriculture and food systems with a strong component of experiential learning. It draws on the College of Agriculture's vast expertise in agronomic, horticultural and animal-based food production systems, economics and business, and environmental sciences. The minor introduces a number of courses with hands-on training and an opportunity to experience small farming enterprises.

Requirements for the Minor (18 credits)

Required Courses (12 Credits)

- AGRY 10500 - Crop Production Credits: 3.00 or
- HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
- SFS 21000 - Small Farm Experience I Credits: 3.00
- SFS 21100 - Small Farm Experience II Credits: 3.00
- SFS 30100 - Agroecology Credits: 3.00
Systems Modules - Choose Three: (3 credits)

- SFS 31100 - Aquaponics Credits: 1.00
- SFS 31200 - Urban Agriculture Credits: 1.00
- SFS 31300 - Farm To Fork Credits: 1.00
- SFS 31400 - Comparative Livestock Production Systems Credits: 1.00
- SFS 31500 - Principles Of Permaculture Credits: 1.00

Selectives (3 credits)

- AGEC 21700 - Economics Credits: 3.00
- AGEC 25000 - Economic Geography Of World Food And Resources Credits: 3.00
- AGEC 31000 - Farm Organization Credits: 3.00
- AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
- AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
- AGRY 37500 - Crop Production Systems Credits: 3.00
- ASM 10400 - Introduction To Agricultural Systems Credits: 3.00
- ASM 20100 - Construction And Maintenance Credits: 3.00
- BTNY 11000 - Introduction To Plant Science Credits: 4.00
- ENTM 20600 - General Entomology Credits: 2.00
- ENTM 20700 - General Entomology Laboratory Credits: 1.00
- ENTM 31100 - Insect Ecology Credits: 3.00
- FNR 21000 - Natural Resource Information Management Credits: 3.00 or
  FS 16100 - Science Of Food Credits: 3.00
- HORT 31800 - Field Production Of Horticultural Crops Credits: 3.00
- HORT 31900 - Controlled Environment Production Of Horticultural Crops Credits: 3.00
- MGMT 21200 - Business Accounting Credits: 3.00
- POL 22300 - Introduction To Environmental Policy Credits: 3.00

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

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Turf Management Minor

Requirements for the Minor (13 credits)
Required Courses (10 Credits)

- AGRY 25500 - Soil Science Credits: 3.00
- AGRY 51000 - Turfgrass Science Credits: 3.00
- HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
- HORT 21100 - Fundamentals Of Turfgrass Culture Laboratory Credits: 1.00

Selective Course - Choose One (3 Credits)

- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 51200 - Integrated Turfgrass Systems Credits: 3.00
- AGRY 51400 - Environmental Stress Management For Turfgrass Credits: 1.00
- ENTM 41000 - Applied Insect Biology Credits: 2.00
- ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00

Notes

- Departmental permission is not required to enroll in this minor.
- Students in the Turf Management and Science majors cannot obtain a Turf Management Minor.

Pre-Requisite Information

For pre-requisite information, log in to mypurdue.purdue.edu and click here.

Disclaimer

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

Non-Degree

Horticulture Supplemental Information

Horticulture Major Selectives

Supervision/Personnel Selective (3 credits)

- HTM 31200 - Talent Management For Service Industries Credits: 3.00
- OLS 38600 - Leadership For Organizational Change Credits: 3.00
- OLS 38800 - Leadership Through Teams Credits: 3.00
- TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
- TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00
- TLI 21300 - Project Management Credits: 3.00

**Horticulture Concentration Selectives**

**Horticulture Production & Marketing Concentration Selectives (12 credits)**

- AGEC 21700 - Economics Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
- AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00
- AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
- AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
- AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
- AGEC 43100 - Advanced Industrial Sales And Marketing Credits: 4.00
- AGEC 45100 - Applied Econometrics Credits: 3.00
- AGEC 45500 - Agricultural Law Credits: 3.00
- AGEC 45600 - Federal Income Tax Law Credits: 3.00
- AGEC 49600 - Selected Topics In Agribusiness Management Credits: 1.00
- AGEC 50600 - Agricultural Marketing And Price Analysis Credits: 3.00
- AGEC 52400 - Agricultural Finance Credits: 3.00
- AGEC 52500 - Environmental Policy Analysis Credits: 3.00
- AGEC 52600 - International Food And Agribusiness Marketing Strategy Credits: 3.00
- AGEC 53000 - Strategic Agribusiness Management Credits: 3.00
- ASM 35000 - Safety In Agriculture Credits: 1.00
- ASM 42000 - Electric Power And Controls Credits: 3.00
- AGRY 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
- AGRY 28500 - World Crop Adaptation And Distribution Credits: 3.00
- AGRY 32100 - Genetics Laboratory Credits: 1.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 34900 - Soil Ecology Credits: 3.00
- AGRY 35500 - Soil Morphology And Geography Credits: 2.00
- AGRY 36500 - Soil Fertility Credits: 3.00
- AGRY 37500 - Crop Production Systems Credits: 3.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
- AGRY 45000 - Soil Conservation and Water Management Credits: 3.00
- AGRY 46500 - Soil Physical Properties Credits: 3.00
- AGRY 48000 - Plant Genetics Credits: 3.00
- AGRY 51000 - Turfgrass Science Credits: 3.00
- AGRY 51200 - Integrated Turfgrass Systems Credits: 3.00
- AGRY 51500 - Plant Mineral Nutrition Credits: 3.00
- AGRY 52500 - Crop Physiology And Ecology Credits: 3.00
- BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00
- BTNY 39000 - Selected Topics In Plant Science Credits: 1.00 to 3.00
- COM 21200 - Approaches To The Study Of Interpersonal Communication Credits: 3.00
• COM 22400 - Communicating In The Global Workplace Credits: 3.00
• COM 25000 - Mass Communication And Society Credits: 3.00
• CSR 28200 - Customer Relations Management Credits: 3.00
• COM 25300 - Introduction To Public Relations Credits: 3.00
• COM 25600 - Introduction To Advertising Credits: 3.00
• COM 30300 - Intercultural Communication Credits: 3.00
• COM 31800 - Principles Of Persuasion Credits: 3.00
• COM 32000 - Small Group Communication Credits: 3.00
• COM 32400 - Introduction To Organizational Communication Credits: 3.00
• COM 32500 - Interviewing: Principles And Practice Credits: 3.00
• COM 32800 - Diversity At Work: A Rhetorical Approach Credits: 3.00
• COM 37400 - Social Interaction Skills: Assessment And Development Credits: 3.00
• COM 37600 - Communication And Gender Credits: 3.00
• CSR 30900 - Leadership Strategies Credits: 3.00
• CSR 33100 - Consumer Behavior Credits: 3.00
• CSR 34200 - Personal Finance Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00
• ENTR 20000 - Introduction To Entrepreneurship And Innovation Credits: 3.00
• ENTR 31000 - Marketing And Management For New Ventures Credits: 3.00
• ENTR 47000 - Gender, Diversity And Leadership Credits: 3.00
• ENTM 33500 - Introduction To Insect Identification Credits: 4.00
• FN 22310 - Introduction To Environmental Policy Credits: 3.00
• FNR 22500 - Dendrology Credits: 3.00
• FNR 44500 - Urban Forest Issues Credits: 3.00
• FNR 44400 - Arboricultural Practices Credits: 4.00
• FS 47000 - Wine Appreciation Credits: 3.00
• HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00
• HORT 21810 - Flowers For Color Credits: 1.00
• HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
• HORT 50600 - Commercial Grape And Wine Production Credits: 3.00
• HTM 31200 - Talent Management For Service Industries Credits: 3.00
• MGMT 20000 - Introductory Accounting Credits: 3.00
• MGMT 21200 - Business Accounting Credits: 3.00
• MGMT 20100 - Management Accounting I Credits: 3.00
• MGMT 32300 - Principles Of Marketing Credits: 3.00
• NRES 23000 - Survey Of Meteorology Credits: 3.00

Landscape Enterprise Management Concentration Selectives:
Business/Supervision/Personnel Selective (12 credits)

• AGEC 21700 - Economics Credits: 3.00
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
• AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00
• AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
• AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
• AGEC 43000 - Agricultural And Food Business Strategy Credits: 3.00
• AGEC 43100 - Advanced Industrial Sales And Marketing Credits: 4.00
• AGEC 45100 - Applied Econometrics Credits: 3.00
• AGEC 45500 - Agricultural Law Credits: 3.00
• AGEC 45600 - Federal Income Tax Law Credits: 3.00
• AGEC 49600 - Selected Topics In Agribusiness Management Credits: 1.00
• AGEC 50600 - Agricultural Marketing And Price Analysis Credits: 3.00
• AGEC 52400 - Agricultural Finance Credits: 3.00
• AGEC 52500 - Environmental Policy Analysis Credits: 3.00
• AGEC 52600 - International Food And Agribusiness Marketing Strategy Credits: 3.00
• AGEC 53000 - Strategic Agribusiness Management Credits: 3.00
• COM 21200 - Approaches To The Study Of Interpersonal Communication Credits: 3.00
• COM 22400 - Communicating In The Global Workplace Credits: 3.00
• COM 25000 - Mass Communication And Society Credits: 3.00
• COM 25300 - Introduction To Public Relations Credits: 3.00
• COM 25600 - Introduction To Advertising Credits: 3.00
• COM 30300 - Intercultural Communication Credits: 3.00
• COM 31800 - Principles Of Persuasion Credits: 3.00
• COM 32000 - Small Group Communication Credits: 3.00
• COM 32400 - Introduction To Organizational Communication Credits: 3.00
• COM 32500 - Interviewing: Principles And Practice Credits: 3.00
• COM 32800 - Diversity At Work: A Rhetorical Approach Credits: 3.00
• COM 37400 - Social Interaction Skills: Assessment And Development Credits: 3.00
• COM 37600 - Communication And Gender Credits: 3.00
• ENGL 20400 - Special Topics In Writing Credits: 3.00
• ENGL 30400 - Advanced Composition Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00
• ENTR 20000 - Introduction To Entrepreneurship And Innovation Credits: 3.00
• ENTR 31000 - Marketing And Management For New Ventures Credits: 3.00
• ENTR 47000 - Gender, Diversity And Leadership Credits: 3.00
• HTM 31200 - Talent Management For Service Industries Credits: 3.00
• MGMT 20100 - Management Accounting I Credits: 3.00
• MGMT 32300 - Principles Of Marketing Credits: 3.00
• OLS 38600 - Leadership For Organizational Change Credits: 3.00
• OLS 38800 - Leadership Through Teams Credits: 3.00
• TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
• TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00

Plant Science Concentration Selectives (15 credits)

• AGRY 34900 - Soil Ecology Credits: 3.00
• AGRY 36500 - Soil Fertility Credits: 3.00
• AGRY 48000 - Plant Genetics Credits: 3.00
• AGRY 51500 - Plant Mineral Nutrition Credits: 3.00
• AGRY 52000 - Principles And Methods Of Plant Breeding Credits: 3.00
• BCHM 46200 - Metabolism Credits: 3.00
• BCHM 56100 - General Biochemistry I Credits: 3.00
• BCHM 56200 - General Biochemistry II Credits: 3.00
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 41500 - Introduction To Molecular Biology Credits: 3.00
• BTNY 20700 - The Microbial World Credits: 3.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
• BTNY 42000 - Plant Cellular And Developmental Biology Credits: 3.00
• BTNY 55000 - Biology Of Fungi Credits: 3.00
• BTNY 55200 - Molecular Approaches In Plant Biology Credits: 3.00
• BTNY 55300 - Plant Growth And Development Credits: 3.00
• HORT 21700 - Woody Landscape Plants Credits: 4.00
• HORT 21810 - Flowers For Color Credits: 1.00
• HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
• HORT 55300 - Plant Growth And Development Credits: 3.00

Public Horticulture Concentration: Communication Selective (3 credits)

• COM 21200 - Approaches To The Study Of Interpersonal Communication Credits: 3.00
• COM 22400 - Communicating In The Global Workplace Credits: 3.00
• COM 25000 - Mass Communication And Society Credits: 3.00
• COM 25300 - Introduction To Public Relations Credits: 3.00
• COM 25600 - Introduction To Advertising Credits: 3.00
• COM 30300 - Intercultural Communication Credits: 3.00
• COM 31800 - Principles Of Persuasion Credits: 3.00
• COM 32000 - Small Group Communication Credits: 3.00
• COM 32400 - Introduction To Organizational Communication Credits: 3.00
• COM 32500 - Interviewing: Principles And Practice Credits: 3.00
• COM 32800 - Diversity At Work: A Rhetorical Approach Credits: 3.00
• COM 37400 - Social Interaction Skills: Assessment And Development Credits: 3.00
• COM 37600 - Communication And Gender Credits: 3.00
• ENGL 23400 - Literature And The Environment Credits: 3.00
• ENGL 30400 - Advanced Composition Credits: 3.00
• ENGL 42000 - Business Writing Credits: 3.00
• ENGL 42100 - Technical Writing Credits: 3.00

Public Horticulture Concentration Selective (6 credits)

• AGEC 20300 - Introductory Microeconomics For Food And Agribusiness Credits: 3.00
• AGEC 20400 - Introduction To Resource Economics And Environmental Policy Credits: 3.00
• AGEC 21700 - Economics Credits: 3.00
• AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
• AGEC 32100 - Principles Of Commodity Marketing Credits: 3.00
• AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
• AGEC 33000 - Management Methods For Agricultural Business Credits: 3.00
• AGEC 33100 - Principles Of Industrial Selling Credits: 3.00
• AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• AGEC 42100 - Advanced Commodity Marketing Credits: 3.00
• AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
• AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00
• AGEC 42700 - Advanced Agribusiness Marketing Credits: 3.00
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<td>MGMT 20100</td>
<td>Management Accounting I</td>
<td>3.00</td>
</tr>
<tr>
<td>MGMT 21200</td>
<td>Business Accounting</td>
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</tr>
<tr>
<td>MGMT 32300</td>
<td>Principles Of Marketing</td>
<td>3.00</td>
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<tr>
<td>MGMT 44301</td>
<td>Management Of Human Resources</td>
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<tr>
<td>MGMT 44362</td>
<td>Leadership In A Changing World</td>
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<td>MGMT 44428</td>
<td>Human Resources Management</td>
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<td>MGMT 44429</td>
<td>Talent Management</td>
<td>3.00</td>
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<tr>
<td>MGMT 44430</td>
<td>Staffing: Talent Acquisition</td>
<td>3.00</td>
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<tr>
<td>MGMT 44431</td>
<td>Compensation: Total Rewards</td>
<td>3.00</td>
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<tr>
<td>MGMT 44690</td>
<td>Negotiation And Decision Making</td>
<td>3.00</td>
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<tr>
<td>OLS 33000</td>
<td>Introduction To Organizational Behavior</td>
<td>3.00</td>
</tr>
<tr>
<td>OLS 38600</td>
<td>Leadership For Organizational Change</td>
<td>3.00</td>
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<tr>
<td>OLS 38800</td>
<td>Leadership Through Teams</td>
<td>3.00</td>
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- PSY 27200 - Introduction To Industrial-Organizational Psychology Credits: 3.00
- SFS 21000 - Small Farm Experience I Credits: 3.00
- SFS 21100 - Small Farm Experience II Credits: 3.00
- SFS 30100 - Agroecology Credits: 3.00
- SFS 30200 - Principles Of Sustainability Credits: 3.00
- SFS 31100 - Aquaponics Credits: 1.00
- SFS 31200 - Urban Agriculture Credits: 1.00
- SFS 31300 - Farm To Fork Credits: 1.00
- SFS 31500 - Principles Of Permaculture Credits: 1.00
- SPAN 10100 - Spanish Level I Credits: 3.00
- SPAN 10200 - Spanish Level II Credits: 3.00
- SPAN 20100 - Spanish Level III Credits: 3.00
- SPAN 20200 - Spanish Level IV Credits: 3.00
- SPAN 30100 - Spanish Level V Credits: 3.00
- SPAN 30200 - Spanish Level VI Credits: 3.00
- TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
- TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00
- TLI 21300 - Project Management Credits: 3.00

Landscape Architecture Supplemental Information

Art & Design Selective (6 credits)

- AD 10500 - Design I Credits: 3.00
- AD 10600 - Design II Credits: 3.00
- AD 11300 - Basic Drawing Credits: 3.00
- AD 11400 - Drawing II Credits: 3.00
- AD 11700 - Black And White Photography Credits: 3.00
- AD 11900 - Color Photography Credits: 3.00
- AD 12500 - Introduction To Interior Design Credits: 3.00
- AD 20000 - Beginning Painting Credits: 3.00
- AD 21300 - Life Drawing I Credits: 3.00
- AD 22000 - Computers In Art Credits: 3.00
- AD 22600 - History Of Art To 1400 Credits: 3.00
- AD 22700 - History Of Art Since 1400 Credits: 3.00
- AD 23300 - Electronic Media Studio Credits: 3.00
- AD 24200 - Ceramics I Credits: 3.00
- AD 25500 - Art Appreciation Credits: 3.00
- AD 26200 - Jewelry And Metalwork I Credits: 3.00
- AD 26500 - Relief Printmaking Credits: 3.00
- AD 26600 - Silkscreen Printmaking Credits: 3.00
- AD 26700 - Digital Imaging Credits: 3.00
- AD 27000 - Constructed Textiles Credits: 3.00
- AD 27100 - Dyed Textiles Credits: 3.00
- AD 30400 - Video Art Credits: 3.00
- AD 31400 - Experimental Drawing Credits: 3.00
- AD 33300 - Photo Silk Screen Credits: 3.00
- AD 34200 - Ceramics II Credits: 3.00
- AD 36200 - Jewelry And Metalwork Credits: 3.00
• AD 36500 - Intermediate Painting Credits: 3.00
• AD 36800 - Etching And Intaglio Printmaking Credits: 3.00
• AD 36900 - Lithographic Printmaking Credits: 3.00
• AD 37000 - Woven Textiles Credits: 3.00
• AD 44200 - Ceramics III Credits: 3.00
• AD 45400 - Modern Architecture Credits: 3.00
• AD 46200 - Metalsmithing Credits: 3.00
• AD 46800 - Printmaking III Credits: 3.00

Landscape Architecture Selectives (2 credits)

• HORT 21000 - Fundamentals Of Turfgrass Culture Credits: 3.00 and
• HORT 21100 - Fundamentals Of Turfgrass Culture Laboratory Credits: 1.00
• HORT 21820 - Hardy Herbaceous Landscape Plants Credits: 2.00
• LA 48100 - Special Topics In Landscape Architecture Credits: 1.00 to 3.00
• LA 48200 - Contemporary Issues In Landscape Architecture Credits: 2.00
• SFS 30200 - Principles Of Sustainability Credits: 3.00
• SFS 31200 - Urban Agriculture Credits: 1.00
• SFS 31500 - Principles Of Permaculture Credits: 1.00

College of Agriculture: Additional Mathematics or Science Selectives

• AGR 33300 - Data Science For Agriculture Credits: 3.00
• AGEC 35200 - Quantitative Techniques For Firm Decision Making Credits: 3.00
• AGEC 45100 - Applied Econometrics Credits: 3.00
• AGRY 12500 - Environmental Science And Conservation Credits: 3.00
• AGRY 25500 - Soil Science Credits: 3.00
• AGRY 27000 - Forest Soils Credits: 3.00
• AGRY 32000 - Genetics Credits: 3.00
• AGRY 32100 - Genetics Laboratory Credits: 1.00
• AGRY 33500 - Weather And Climate Credits: 3.00
• AGRY 36500 - Soil Fertility Credits: 3.00
• AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
• AGRY 46500 - Soil Physical Properties Credits: 3.00
• ANSC 22100 - Principles Of Animal Nutrition Credits: 3.00
• ANSC 23000 - Physiology Of Domestic Animals Credits: 4.00
• BCHM 10000 - Introduction To Biochemistry Credits: 2.00
• BCHM 30700 - Biochemistry Credits: 3.00
• BCHM 30900 - Biochemistry Laboratory Credits: 1.00
• BIOL 22100 - Introduction To Microbiology Credits: 4.00
• BIOL 23100 - Biology III: Cell Structure And Function Credits: 3.00
• BIOL 23200 - Laboratory In Biology III: Cell Structure And Function Credits: 2.00
• BIOL 24100 - Biology IV: Genetics And Molecular Biology Credits: 3.00
• BIOL 24200 - Laboratory In Biology IV: Genetics And Molecular Biology Credits: 2.00
• BIOL 28600 - Introduction To Ecology And Evolution Credits: 2.00
• BTNY 11000 - Introduction To Plant Science Credits: 4.00
• BTNY 26200 - Plant Structure And Tissue Biology Credits: 3.00
• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30500 - Plant Evolution And Taxonomy Credits: 3.00
• BTNY 35000 - Biotechnology In Agriculture Credits: 3.00
• BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
• CHM 22400 - Introductory Quantitative Analysis Credits: 4.00
• CHM 25700 - Organic Chemistry Credits: 4.00
• CHM 25701 - Organic Chemistry Laboratory Credits: 1.00
• CHM 26100 - Organic Chemistry I Credits: 3.00
• CHM 26200 - Organic Chemistry II Credits: 3.00
• CHM 26300 - Organic Chemistry Laboratory I Credits: 1.00
• CHM 26400 - Organic Chemistry Laboratory II Credits: 1.00
• CHM 25500 - Organic Chemistry For The Life Sciences I Credits: 3.00
• CHM 25501 - Organic Chemistry For The Life Sciences Laboratory I Credits: 1.00
• CHM 25600 - Organic Chemistry For The Life Sciences II Credits: 3.00
• CHM 25601 - Organic Chemistry For The Life Sciences Laboratory II Credits: 1.00
• CS 18000 - Problem Solving And Object-Oriented Programming Credits: 4.00
• EAPS 11100 - Physical Geology Credits: 3.00
• EAPS 11200 - Earth Through Time Credits: 3.00
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00
• EAPS 22100 - Survey Of Atmospheric Science Credits: 3.00
• ENTM 10200 - The Practice Of Science Credits: 2.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• ENTM 21000 - Introduction To Insect Behavior Credits: 3.00
• ENTM 24200 - Data Science Credits: 3.00
• ENTM 25300 - Insect Physiology And Biochemistry Credits: 4.00
• ENTM 30100 - Experimentation And Analysis Credits: 3.00
• ENTM 31200 - Plant-Insect Chemical Ecology Credits: 3.00
• ENTM 32810 - Practical Molecular Biology Credits: 3.00
• ENTM 35300 - Insecticides And Environment Credits: 3.00
• ENTM 41000 - Applied Insect Biology Credits: 2.00
• ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
• FNR 12500 - Environmental Science And Conservation Credits: 3.00
• FNR 20100 - Marine Biology Credits: 3.00
• FNR 23000 - The World's Forests And Society Credits: 3.00
• FNR 24000 - Wildlife In America Credits: 3.00
• FNR 24150 - Ecology And Systematics Of Fishes, Amphibians And Reptiles Credits: 3.00
• FNR 25150 - Ecology And Systematics Of Mammals And Birds Credits: 3.00
• FNR 30500 - Conservation Genetics Credits: 3.00
• FNR 35700 - Fundamental Remote Sensing Credits: 3.00
• HORT 10100 - Fundamentals Of Horticulture Credits: 3.00
• HORT 30100 - Plant Physiology Credits: 4.00
• MA 16200 - Plane Analytic Geometry And Calculus II Credits: 5.00
• MA 16600 - Analytic Geometry And Calculus II Credits: 4.00
• MA 26100 - Multivariate Calculus Credits: 4.00
• MA 26500 - Linear Algebra Credits: 3.00
• NRES 12500 - Environmental Science And Conservation Credits: 3.00
• NRES 23000 - Survey Of Meteorology Credits: 3.00
• NRES 25500 - Soil Science Credits: 3.00
• PHYS 17200 - Modern Mechanics Credits: 4.00
• PHYS 21400 - The Nature Of Physics Credits: 3.00
• PHYS 22000 - General Physics Credits: 4.00
• PHYS 22100 - General Physics Credits: 4.00
• PHYS 23300 - Physics For Life Sciences I Credits: 4.00
• PHYS 23400 - Physics For Life Sciences II Credits: 4.00
• PHYS 24100 - Electricity And Optics Credits: 3.00
• STAT 22500 - Introduction To Probability Models Credits: 3.00
• STAT 50200 - Experimental Statistics II Credits: 3.00
• STAT 51100 - Statistical Methods Credits: 3.00
• STAT 51200 - Applied Regression Analysis Credits: 3.00

Sustainable Food & Farming Systems Supplemental Information

Ecology/Environment Selective (3 Credits)

• AGRY 12500 - Environmental Science And Conservation Credits: 3.00
• AGRY 33500 - Weather And Climate Credits: 3.00
• AGRY 33700 - Environmental Hydrology Credits: 3.00
• AGRY 33800 - Environmental Field Skills Credits: 1.00
• ASM 23600 - Environmental Systems Management Credits: 3.00
• BTNY 30200 - Plant Ecology Credits: 3.00
• EAPS 12500 - Environmental Science And Conservation Credits: 3.00
• ENTM 31100 - Insect Ecology Credits: 3.00
• FNR 21000 - Natural Resource Information Management Credits: 3.00
• FNR 37500 - Human Dimensions of Natural Resource Management Credits: 3.00
• FNR 54300 - Conservation Biology I Credits: 3.00
• NRES 12500 - Environmental Science And Conservation Credits: 3.00
• POL 22300 - Introduction To Environmental Policy Credits: 3.00

Pest Management Selective (6 Credits)

• BTNY 30100 - Introductory Plant Pathology Credits: 3.00
• BTNY 30400 - Introductory Weed Science Credits: 3.00
• BTNY 53500 - Plant Disease Epidemiology Credits: 3.00
• ENTM 20600 - General Entomology Credits: 2.00
• ENTM 20700 - General Entomology Laboratory Credits: 1.00
• ENTM 41000 - Applied Insect Biology Credits: 2.00
• ENTM 41001 - Insects Of Urban Landscapes Credits: 1.00
• ENTM 41002 - Insects Of Agricultural Crops Credits: 1.00

Systems Modules Selective (6 Credits)

• HORT 12100 - Medicine In The Garden Credits: 1.00
• SFS 31100 - Aquaponics Credits: 1.00
• SFS 31200 - Urban Agriculture Credits: 1.00
• SFS 31300 - Farm To Fork Credits: 1.00
• SFS 41100 - Structural Racism In US Agriculture Credits: 1.00
• SFS 41200 - Colonialism, Globalization, And Food Justice Credits: 1.00
• SFS 41300 - The Cultures And Agricultures Of The United States Credits: 1.00
• SFS 31500 - Principles Of Permaculture Credits: 1.00
Turf Management and Science Supplemental Information

Business/Management Selective (9 credits)

- AGEC 20201 - Introduction To Data Analytics For Agricultural Business Credits: 3.00
- AGEC 22000 - Economics Of Agricultural Markets Credits: 3.00
- AGEC 32700 - Principles Of Food And Agribusiness Marketing Credits: 3.00
- AGEC 33300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 42400 - Financial Management Of Agricultural Business Credits: 3.00
- AGEC 42500 - Estate Planning And Property Transfer Credits: 3.00
- AGEC 42900 - Agri-Marketing Analytics Credits: 3.00
- AGEC 43300 - Food Distribution - A Retailing Perspective Credits: 3.00
- AGEC 43400 - Agricultural And Food Business Strategy Credits: 3.00
- AGEC 43600 - Advanced Industrial Sales And Marketing Credits: 4.00
- AGEC 45100 - Applied Econometrics Credits: 3.00
- AGEC 45200 - Agricultural Law Credits: 3.00
- AGEC 45400 - Federal Income Tax Law Credits: 3.00
- AGEC 48600 - Selected Topics In Agribusiness Management Credits: 1.00
- AGEC 50600 - Agricultural Marketing And Price Analysis Credits: 3.00
- AGEC 52400 - Agricultural Finance Credits: 3.00
- AGEC 52500 - Environmental Policy Analysis Credits: 3.00
- AGEC 53000 - Strategic Agribusiness Management Credits: 3.00
- CSR 20900 - Introduction To Retail Management Credits: 3.00
- CSR 28200 - Customer Relations Management Credits: 3.00
- CSR 30900 - Leadership Strategies Credits: 3.00
- CSR 31500 - Relationship Selling Credits: 3.00
- CSR 33100 - Consumer Behavior Credits: 3.00
- CSR 33200 - Cross-Cultural Marketing And International Retailing Credits: 3.00
- CSR 34200 - Personal Finance Credits: 3.00
- CSR 38600 - Risk Management Credits: 3.00
- CSR 40400 - Strategic Management For Service Industries Credits: 3.00
- CSR 40600 - E-Retailing Credits: 3.00
- CSR 41500 - Sales Force Management Credits: 3.00
- CSR 48400 - Consumer Investment And Savings Decisions Credits: 3.00
- CSR 48500 - Case Studies In Financial Planning Credits: 3.00
- CSR 48600 - Retirement Planning And Employee Benefits Credits: 3.00
- CSR 48100 - Ethics And Behaviors In Financial Planning Credits: 3.00
- ENTR 20000 - Introduction To Entrepreneurship And Innovation Credits: 3.00
- ENTR 31000 - Marketing And Management For New Ventures Credits: 3.00
- TLI 11200 - Foundations Of Organizational Leadership Credits: 3.00
- TLI 15200 - Business Principles For Organizational Leadership Credits: 3.00
- TLI 21300 - Project Management Credits: 3.00

Turf Management Selective (9 credits)

- AGRY 34900 - Soil Ecology Credits: 3.00
- AGRY 33500 - Weather And Climate Credits: 3.00
- AGRY 33700 - Environmental Hydrology Credits: 3.00
- AGRY 33800 - Environmental Field Skills Credits: 1.00
- AGRY 38500 - Environmental Soil Chemistry Credits: 4.00
Pre-Program

Pre-Landscape Architecture

See the program Landscape Architecture, BSLA for information.

Pre-Landscape Architecture Major Change (CODO) Requirements

Pre-Program Requirement

30-31 Credits

Required Major Courses (9 credits)

- LA 10110 - Survey Of Landscape Architecture Credits: 2.00
- LA 11600 - Graphic Communication In Design I Credits: 3.00
- LA 16100 - Land And Society Credits: 1.00 (satisfies Science, Technology, & Society for core)
- LA 21600 - Studio I: Foundational Design Credits: 3.00

Other Departmental/Program Course Requirements (21-22 credits)

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦
- MA 15800 - Precalculus - Functions And Trigonometry Credits: 3.00 (satisfies Quantitative Reasoning for core)
  
  Written Communication Selective - Credit Hours: 3.00-4.00 ♦ (satisfies Written Communication & Information Literacy for core)
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00
- ENGL 10800 - First Year Composition Credits: 3.00
Oral Communication Selective - Credit Hours: 3.00 (satisfies Oral Communication for core)
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00
- COM 21700 - Science Writing And Presentation Credits: 3.00
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00
- SCLA 10200 - Transformative Texts, Critical Thinking And Communication II: Modern World Credits: 3.00
- Art and Design Selective - Credit Hours: 3.00 (see Landscape Architecture, BSLA for courses)

University Requirements

University Core Requirements

For a complete listing of University Core Course Selectives, visit the Provost's Website.

- Human Cultures: Behavioral/Social Science (BSS)
- Human Cultures: Humanities (HUM)
- Information Literacy (IL)
- Oral Communication (OC)
- Quantitative Reasoning (QR)
- Science #1 (SCI)
- Science #2 (SCI)
- Science, Technology, and Society (STS)
- Written Communication (WC)

Civics Literacy Proficiency Requirement

The Civics Literacy Proficiency activities are designed to develop civic knowledge of Purdue students in an effort to graduate a more informed citizenry. For more information visit the Civics Literacy Proficiency website.

Students will complete the Proficiency by passing a test of civic knowledge, and completing one of three paths:

- Attending six approved civics-related events and completing an assessment for each; or
- Completing 12 podcasts created by the Purdue Center for C-SPAN Scholarship and Engagement that use C-SPAN material and completing an assessment for each; or
- Earning a passing grade for one of these approved courses (or transferring in approved AP or departmental credit in lieu of taking a course).

Upper Level Requirement

- Resident study at Purdue University for at least two semesters and the enrollment in and completion of at least 32 semester hours of coursework required and approved for the completion of the degree. These courses are expected to be at least junior-level (30000+) courses.
- Students should be able to fulfill most, if not all, of these credits within their major requirements; there should be a clear pathway for students to complete any credits not completed within their major.

Fall 1st Semester

- AGR 10100 - Introduction To The College Of Agriculture And Purdue University Credits: 0.50
- AGR 12000 - Introduction To Horticulture And Landscape Architecture Academic Programs Credits: 0.50
- LA 10110 - Survey Of Landscape Architecture Credits: 2.00
- LA 11600 - Graphic Communication In Design I Credits: 3.00
- LA 16100 - Land And Society Credits: 1.00
- BIOL 11000 - Fundamentals Of Biology I Credits: 4.00 ♦

Written Communication Selective - Credit Hours: 3.00-4.00 ♦
- ENGL 10600 - First Year Composition With Conferences Credits: 4.00 ♦ or
- ENGL 10800 - First Year Composition Credits: 3.00 ♦

14-15 Credits

Spring 2nd Semester

- LA 21600 - Studio I: Foundational Design Credits: 3.00
- MA 15800 - PreCalculus - Functions And Trigonometry Credits: 3.00
- BIOL 11100 - Fundamentals Of Biology II Credits: 4.00 ♦ or
- BTNY 11000 - Introduction To Plant Science Credits: 4.00 ♦

Oral Communication Selective - Credit Hours: 3.00 ♦
- COM 11400 - Fundamentals Of Speech Communication Credits: 3.00 ♦ or
- COM 21700 - Science Writing And Presentation Credits: 3.00 ♦ or
- EDPS 31500 - Collaborative Leadership: Interpersonal Skills Credits: 3.00 ♦ or
- SCLA 10200 - Transformative Texts, Critical Thinking And Communication II: Modern World Credits: 3.00 ♦
- Art and Design Selective - Credit Hours: 3.00

16 Credits

Notes

Change of Options from Pre-landscape Architecture to the Professional Landscape Architecture Program

Pre-landscape architecture students, who wish to continue into the landscape architecture professional program, or transfer students from other institutions, must qualify by meeting the following criteria, or through further assessment as described below:

1. Overall GPA - The student must be in good academic standing. A minimum overall GPA of 2.5 across all Purdue and transferred credit coursework is necessary for acceptance into the landscape architecture professional program.

2. Grade point average of 3.0 or higher in all landscape architecture prefixed courses taken (LA Index).

3. Completion of LA 10600; or 11600 and 21600; or approved equivalent, and a minimum of 24 credit hours of Purdue accepted college level coursework are the minimum necessary for acceptance into the landscape architecture professional program.

World Language Courses

World Language proficiency requirements vary by program. The following list is inclusive of all world languages PWL offers for credit; for acceptable languages and proficiency levels, see your advisor. (ASL-American Sign Language; ARAB-Arabic; CHNS-Chinese; FR-French; GER-German; GREK-Greek(Ancient); HEBR-Hebrew(Biblical); HEBR-Hebrew(Modern); ITAL-Italian; JPNS-Japanese; KOR-Korean; LATN-Latin; PTGS=Portuguese; RUSS-Russian; SPAN-Spanish)

Critical Course

The ♦ course is considered critical.
In alignment with the Degree Map Guidance for Indiana's Public Colleges and Universities, published by the Commission for Higher Education (pursuant to HEA 1348-2013), a Critical Course is identified as "one that a student must be able to pass to persist and succeed in a particular major. Students who want to be nurses, for example, should know that they are expected to be proficient in courses like biology in order to be successful. These would be identified by the institutions for each degree program."

**Disclaimer**

The student is ultimately responsible for knowing and completing all degree requirements. Consultation with an advisor may result in an altered plan customized for an individual student. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion.

Comparative information about Purdue University and other U.S. educational institutions is also available through the College Navigator tool, provided by the National Center for Education Statistics, and through the U.S. Department of Education College Scorecard.

-
College of Agriculture (Graduate)

Graduate Degree

Your master's or doctoral program will be specialized and flexible to prepare you to meet your professional objectives. You'll find that we offer a growing number of multidisciplinary graduate degree programs, using directed experiences and courses from faculty members in one or more Purdue departments or colleges. Business and industry, government, and academic institutions throughout the world recruit our graduates for leading positions.

Contact Information

College of Agriculture
615 Mitch Daniels Blvd.
West Lafayette, IN 47907-2053
Email: exp@purdue.edu
Phone: 765-494-8470

College of Agriculture Administration (Graduate)

Master of Agriculture

Agriculture, Master of Agriculture (Modality: Residential & Online)

Concentration:

- Appld Geosp Data An & Str Comm

Post-Baccalaureate Certificate

Spatial Data Science, Post Baccalaureate Certificate (Modality: Residential & Online)

-
Department of Agricultural and Biological Engineering (Graduate)

Website URL:
https://engineering.purdue.edu/ABE/foryou/graduate

Department/School Head:
Nathan S. Mosier

Academic Programs:

Master's and Ph.D. programs are offered in the following areas:

- Biological Engineering
- Food, Pharmaceutical, and Biological Process Engineering
- Environmental and Natural Resources Engineering
- Machine Systems Engineering
- Agricultural Systems Management
- Agricultural Safety and Health
- Data Science and Digital Agriculture

The Purdue University Department of Agricultural and Biological Engineering graduate program is currently ranked #1 by U.S. News & World Report and has been nationally ranked for more than a dozen years. State-of-the-art facilities and internationally-known faculty support an average of 100 on-campus ABE graduate students per year and 150 graduate students through ABE's hybrid Biotechnology Innovation & Regulatory Science program. Our innovative research creates products and processes that address national and global challenges in food, energy, water, health, and the environment.

Concentrations (Areas of Study):

- Biotechnology Innovation and Regulatory Science (Hybrid delivery MS also available)
- Data Science for Agricultural and Biological Engineering
- Fluid Power

Regular Graduate Faculty by Rank:

Professor

R. P. Kingsly Ambrose
Dennis Buckmaster
Natalie Carroll
Keith Cherkauer  
Kari Clase  
Bernard Engel  
William Field  
Jane Frankenberger  
Margaret Gitau  
Konstantina Gkritza  
Klein Ileleji  
Michael Ladisch  
John Lumkes  
Nathan Mosier  
Ganesan Narsimhan  
Jiqin Ni  
Martin Okos  
D. Marshall Porterfield  
Jenna Rickus  
Dharmendra Saraswat  
Roger Tormoehlen  
Andrea Vacca

**Associate Professor**

Somali Chaterji  
Sadegh Dabiri  
Meng Deng  
Vincent Duffy  
Abigail Engelberth  
Jian Jin  
Shweta Singh  
Robert Stwalley

**Assistant Professor**

Shawn Ehlers  
John Evans  
Caitlin Proctor  
Ankita Raturi  
Kurt Ristroph  
Lizhi Shang  
Halis Simsek  
Mohit Verma

**Adjunct Faculty**

Indrajeet Chaubey  
Jingqiu Chen  
Dennis Flanagan  
Joseph Irudayaraj  
Kevin Keener  
Dirk Maier  
Sara McMillan
Rabi Mohtar  
Kevin Solomon  
Mark Williams  
Eduardo Ximenes

**Courtesy Faculty**

Laura Bowling  
Carlos Corvalan  
Melba Crawford  
Jose Garcia Bravo  
Allen Garner  
Leopold Green  
Jacob Hosen  
Jen-Yi Huang  
Jinha Jung  
James Krogmeier  
Niaz Latif  
Stephen Lindemann  
Venkatesh Merwade  
Brittany Newell  
David Umulis  
Mark Ward

**Concentration (Graduate)**

**Data Science Concentration for Agriculture and Biological Engineering (Graduate)**

**Master of Science**

**Agricultural & Biological Engineering, MS (Modality: Residential, Hybrid & Online)**

**Concentrations:**

- Biotechnology-PULSe  
- Biotech Innov & Regulatory Science  
- Computational Engineering  
- Computational Life Science  
- Data Science for Agricultural & Biological Engineering  
- Fluid Power  
- Interdisciplinary Ecological Science & Engineering

**Master of Science in Agricultural and Biological Engineering**
Agricultural & Biological Engineering, MSABE (Modality: Residential & Online)

Concentrations:

- Biotechnology - PULSe
- Biotechnology Innovation and Regulatory Science
- Computational Engineering
- Computational Life Science
- Data Science for Agricultural & Biological Engineering
- Fluid Power
- Interdisciplinary Ecological Science & Engineering

Master of Science in Engineering

Agricultural & Biological Engineering, MSE

Concentrations:

- Biotechnology - PULSe
- Computational Engineering
- Computational Life Science
- Fluid Power
- Interdisciplinary Ecological Science & Engineering

Doctor of Philosophy

Agricultural & Biological Engineering, PHD

Concentrations:

- Biotechnology - PULSe
- Computational Engineering
- Computational Life Science
- Fluid Power
- Interdisciplinary Ecological Science & Engineering

Post-Baccalaureate Certificate
Biotechnology Quality & Regulation Compliance, Post Baccalaureate Certificate (Modality: Residential, Hybrid & Online)

Hybrid Vehicle Systems ABE, Post Baccalaureate Certificate

Department of Agricultural Economics (Graduate)

Website URL:
https://ag.purdue.edu/agecon/Pages/default.aspx

Department/School Head:
Nicole Widmar

Academic Programs:

Master's and Ph.D. Programs

The agricultural economics curriculum at Purdue University is in the tradition of the Land Grant College philosophy: knowledge for the improvement of the human condition. Sound judgment, rigorous analysis and ability to define and solve problems are the goals of the professional agricultural economist. Our program endeavors to create a challenging environment of scholarship, creativity, and freedom of intellectual inquiry.

Study towards the master's and Ph.D. degrees requires instruction in economic theory, quantitative methods and analysis, courses in specialized fields of interest, and completion of research project culminating in a written thesis or dissertation. The Ph.D. degree requires successful completion of a written qualifying exam in microeconomic theory and a written preliminary prospectus exam. Information available here: https://ag.purdue.edu/agecon/Pages/Graduate-Program.aspx

Professional Master's and Doctoral Programs

We offer a Professional Masters in International Agribusiness, a non-thesis degree that can be completed in three semesters of residence plus the summer. Information is available at https://ag.purdue.edu/department/agecon/international-programs/pmia/index.html

Concentrations (Areas of Study):

Agribusiness Management and Marketing
Applied Economics Quantitative Methods
Online/Distance Programs:

Our distance MS/MBA program is jointly administered with the Indiana University Kelly School of Business. It is focused on the unique management challenges faced by managers with food and agribusiness firms. Information is available at https://ag.purdue.edu/department/agecon/graduate_program/mj-ms-ag-law-program.html.

Our distance MJ/MS program is jointly administered with the Indiana University McKinney School of Law. It is focused on management and legal policy challenges faced by managers with food and agribusiness firms. Information is available at https://ag.purdue.edu/agecon/Pages/aglaw.aspx.

We also offer an online version of our Professional Masters in International Agribusiness, a non-thesis degree that can be completed in two years. Information is available at https://ag.purdue.edu/department/agecon/international-programs/pmia/index.html.

Combined Degree Programs: (Undergraduate Degree / Master's Degree)

The College of Agriculture offers an integrated degree program that will enable outstanding undergraduates to obtain a Bachelor of Science and Master of Science (thesis option) after the successful completion of both degree requirements. The information here: https://ag.purdue.edu/oap/Pages/integratedbsms.aspx

Graduate Certificates (Degree or Non-Degree Students):

Residents of Indiana may apply for enrollment as post-baccalaureate non-degree students if they wish to take graduate-level course work in agricultural economics, but prefer not to be enrolled in a regular degree program.

Regular Graduate Faculty by Rank:

Professor

Joseph V. Balagtas
Michael S. Delgado
W. Scott Downey
Ken Foster
Allan W. Gray
Thomas W. Hertel
Russell Hillberry
Todd Kuethe
Michael Langemeier
John G. Lee
Maria I. Marshall
James R. Mintert
Kwamena Quagrainie
Jacob Ricker-Gilbert
Juan Sesmero
Gerald E. Shively
Farzad Taheripour
Holly Wang
Nicole Olynk-Widmar

**Associate Professor**

Brady Brewer
Brenna Ellison
Bhagyashree Katare
Roman M. Keeney
Mindy Mallory
Carson Reeling
Ariana P Torres Bravo
Steven Wu

**Assistant Professor**

Diego Cardoso
Bernhard Dalheimier
Chad Fiechter
Kajal Gulati
Meilin Ma
Laura Montenovo
Guy Tchuente
Tor Tolhurst

**Master of Science**

**Agricultural Economics, MS (Modality: Residential & Online)**

**Concentrations**

- Agricultural Law
- Computational Science
- Food & Agribusiness Management
- Ingestive Behavior
- Interdisciplinary Ecological Science & Engineering
- International Agribusiness for Professionals
- Peace Corp Msts Intl - IESE

**Doctor of Philosophy**
Agricultural Economics, PHD

Concentrations

- Computational Science
- Ingestive Behavior Concentration
- Interdisciplinary Ecological Science & Engineering

Department of Agricultural Sciences Education and Communication (Graduate)

Website URL:

https://ag.purdue.edu/asec/Pages/default.aspx

Department/School Head:

Rama Radhakrishna

Academic Programs:

Master's and Ph.D. Programs

Do you want a career that has an impact on developing people and agriculture? In ASEC, you will combine a people-oriented degree with work in selected technical and scientific areas. Prepare to become a leader in the world's food, fiber, and natural resources system by empowering the leadership capacity and capability of individuals and groups, educating youth and adults through agricultural and life sciences, and enhancing the quality of life for all citizens.

The department offers both masters and doctoral degree options.

Regular Graduate Faculty by Rank:

Professor

Colleen Brady
Natalie J. Carroll
Neil Knobloch
Pamala Morris
B. Allen Talbert
Roger L. Tormoehlen
Mark A. Tucker

Associate Professors

Linda Pfeiffer
Hui-Hui Wang

Associate Clinical Professors

Casey Mull

Assistant Professors

Sarah LaRose
Julia Bello-Bravo

Master of Science

Agricultural Sciences Education and Communication, MS

Concentrations:

- Agricultural & Extension Education
- Interdisciplinary Ecological Science & Engineering

Doctor of Philosophy

Agricultural Sciences Education and Communication, PHD

Concentration:

- Interdisciplinary Ecological Science & Engineering

Post-Baccalaureate Certificate

Agricultural Sciences Education, Extension and Communication, Post Baccalaureate Certificate (Modality: Residential, Hybrid & Online)
Department of Agronomy (Graduate)

Overview

The Department of Agronomy is home to trailblazing faculty and staff who share an unwavering commitment to student success and are celebrated for ground-breaking research. Our graduate students have access to innovative research opportunities and the latest technologies in the field. Our curriculum emphasizes the foundational knowledge and skills required to improve the productivity and management of agroecosystems using biotechnologies, informatics, and technical solutions for a broad range of environmental challenges.

MS (theses / non-thesis) and PhD degrees are offered in topics related to:

- Plant Genetics & Breeding
- Plant Physiology
- Crop Production
- Soil Science
- Agroecology
- Remote Sensing
- Crop Modeling
- Environmental Microbiology
- Land & Water Management

We invite you to become part of our research community, where you will refine your critical thinking skills, expand your professional network, and contribute your unique perspective to shaping agricultural systems both locally and globally.

Faculty (website)

Department of Agronomy (website)

Contact Information

Department of Agronomy
Purdue University
Lilly Hall of Life Sciences
915 Mitch Daniels Blvd
West Lafayette, IN 47907-2054
Phone: 765-494-4773

Email: agronomy@purdue.edu
Undergraduate Studies

Department of Agronomy - Undergraduate Program Information

Academic Programs:

Master's and Ph.D. Programs

A Masters (non-thesis), Masters (thesis) and Doctoral degrees are all offered.

The Agronomy Department offers M.S. and Ph.D. degrees in plant genetics and breeding, plant physiology, crop production, soil science, agroecology, land management, and climate. Our graduate programs emphasize developing and applying basic scientific principles to optimize agricultural systems management. We emphasize research with a global application as we hope to instill skill sets that allow for increased system resilience in response to the rapidly changing world.

Master of Science

Agronomy, MS

Concentrations:

1. Agricultural Meteorology
2. Biomolecular Structure and Biophysics - PULSe
3. Chromatin Regulation Gene Expression - PULSe
4. Computational Life Science
5. Crop Physiology & Ecology
6. Integrative Plant Science - PULSe
7. Interdisciplinary Ecological Science & Engineering
8. Microbiology - PULSe
9. Molecular Evolutionary Genetics - PULSe
10. Molecular Signaling and Cancer Biology - PULSe
11. Molecular Virology - PULSe
12. Peace Corp Msts Intl - IESE
13. Plant Biology-PULSe
14. Plant Genetics & Breeding
15. Soil Chemistry
16. Soil Fertilization & Plant Nutrition
17. Soil Microbiology
18. Soil Mineralogy & Genesis
19. Soil Physics

Doctor of Philosophy
Agronomy, PHD

Concentrations

1. Agricultural Meteorology
2. Biomolecular Structure and Biophysics - PULSe
3. Chromatin Regulation Gene Expression - PULSe
4. Computational Life Science
5. Crop Physiology & Ecology
6. Integrative Plant Science - PULSe
7. Interdisciplinary Ecological Science & Engineering
8. Microbiology - PULSe
9. Molecular Evolutionary Genetics - PULSe
10. Molecular Signaling and Cancer Biology - PULSe
11. Molecular Virology - PULSe
12. Plant Biology - PULSe
13. Plant Genetics & Breeding
14. Soil Chemistry
15. Soil Fertilization & Plant Nutrition
16. Soil Microbiology
17. Soil Mineralogy & Genesis
18. Soil Physics

- Department of Animal Sciences (Graduate)

Website URL:

https://ag.purdue.edu/ansc/Pages/GradProgram.aspx

Department/School Head:

Interim Head: Dr. Paul Ebner

Academic Programs:

Master's and Ph.D. Programs

Research conducted by graduate students in our department spans a continuum encompassing basic and applied approaches in the discovery that impact both agricultural and biomedical sciences.

M.S. and Ph.D. degrees in the field of Animal Sciences
Ph.D. programs in the area of Interdisciplinary Genetics (IGNT)
Concentrations (Areas of Study):

Graduate study toward the M.S. and Ph.D. degrees in the field of Animal Sciences may be pursued in the areas of Animal Behavior and Welfare, Cellular and Molecular Biology, Genetics, Management, Meat Science and Food Safety, Neuroscience, Nutrition, and Physiology. In addition, Ph.D. programs are offered in the area of Interdisciplinary Genetics (IGNT).

Regular Graduate Faculty by Rank:

Professor

Layi Adeola
Kolapo Ajuwon
Ryan Cabot
Candace Croney
Paul Ebner
Marcos Fernandez
Yuan H. (Brad) Kim
Elizabeth Karcher
Ronald Lemenager
Zoltan Machaty
Karen Plaut
Allan Schinckel

Associate Professor:

Rodney Allrich
Jacquelyn Boerman
Luiz Brito
Marisa Erasmus
Dale Forsyth
Greg Fraley
Timothy Johnson
Darrin Karcher
Brian Richert
Jon Schoonmaker

Assistant Professor

Tingting Ju
James Markworth
Heather Neave
Alex Pasternak
Hinayah Rojas de Oliveira

Research Faculty
Clinical Assistant Professor

Casie Bass
Stacy Zuelly

Adjunct Faculty

Colleen Brady
Heng-wei Cheng
Aaron Cowieson
Shawn Donkin
Nathan Horn
Jay Johnson
Kara Stewart

Master of Science

Animal Science, MS

Concentrations:

1. Animal Behavior & Welfare
2. Cellular & Molecular Biology
3. Chromatin Regulation Gene Expression - PULSe
4. Ingestive Behavior
5. Integrative Neuroscience - PULSe
6. Management
7. Meat Science & Food Safety
8. Molecular Evolutionary Genetics - PULSe
9. Nutrition
10. Physiology

Doctor of Philosophy

Animal Science, PHD

Concentrations:
Animal Science/Cancer Research, PHD

- Department of Biochemistry (Graduate)

Website URL:

https://ag.purdue.edu/biochem/Pages/GradHomePage.aspx

Department/School Head:

Joe Ogas (Interim Department Head)

Academic Programs:

Master's and Ph.D. Programs

- Currently only accepting applications for the Ph.D. program

The Department of Biochemistry is a vibrant educational and research community engaged in multi-disciplinary, basic research in the biomedical and plant sciences. Our mission is to provide an environment that fosters creative thinking and nurtures a passion for the life sciences.

Regular Graduate Faculty by Rank:

Distinguished Professor
Clint Chapple
Natalia Dudareva
Andrew D. Mesecar

Professor

Scott D. Briggs
Brian Dilkes
James D. Forney
Barbara L. Golden
Mark C. Hall
Joe Ogas
W. Andy Tao
Elizabeth Tran

Associate Professor

Humaira Gowher
Orla Hart
Majid Kazemian
Ann L Kirchmaier
Xing Liu
Sujith Puthiyaveetil
Vikki Weake
Jen Wisecaver

Assistant Professor

Benjamin Carter
Kyle Cottrell
Hanna Hall

Master of Science

Biochemistry and Molecular Biology, MS

Biochemistry and Molecular Biology Graduate Program

Concentrations:

- Biochemistry - Molecular Biology
- Biomolecular Structure and Biophysics - PULSe
- Chemical Biology - PULSe
- Chromatin Regulation Gene Expression - PULSe
- Computational & Systems Biology - PULSe
• Computational Life Science
• Integrative Plant Science - PULSe
• Molecular Evolutionary Genetics - PULSe
• Molecular Signaling and Cancer Biology - PULSe
• Molecular Virology - PULSe
• Neuroscience
• Plant Biochemistry & Molecular Biology
• Plant Cell & Developmental Biology
• Plant Ecology, Evolution and Systematics
• Plant Physiology
• Virology

Doctor of Philosophy

Biochemistry and Molecular Biology, PHD

Biochemistry and Molecular Biology Graduate Program

Concentrations:

• Biochemistry - Molecular Biology
• Biomolecular Structure and Biophysics - PULSe
• Chemical Biology-PULSe
• Chromatin Regulation Gene Expression - PULSe
• Computational Life Science
• Computational & Sys Biol-PULSe
• Interdisciplinary Genetics
• Integrative Neuroscience - PULSe
• Integrative Plant Science-PULSe
• Molecular Evolutionary Genetics - PULSe
• Molecular Signaling and Cancer Biology - PULSe
• Molecular Virology-PULSe
• Neuroscience
• Plant Biochem & Molec Biol
• Plant Biology-PULSe
• Plant Cell & Developmental Biology
• Plant Ecology, Evolution and Systematics
• Plant Physiology
• Virology

Post-Baccalaureate Certificate

Biochemistry and Molecular Biology, Post Baccalaureate Certificate
Department of Botany and Plant Pathology (Graduate)

Website

Department/School Head:

Tesfaye Mengiste, Department Head

Academic Programs:

Master's and Ph.D. Programs

Our research on plants and microbes helps: protect the environment, apply genetic knowledge to improve plants, manage natural resources, control weeds, and diagnose plant disease.

M.S. and Ph.D. Programs:

- The Plant Biology Degree Program
- The Plant Pathology Degree Program
- The Weed Science Degree Program

Concentrations (Areas of Study):

- The Plant Biology Degree Program
  - Plant Growth and Development
  - Genetics and Evolution of Plants
  - Plant Cell Biology
  - Plant Physiology
  - Plant Ecology
  - Plant Genomics and Bioinformatics
  - Plant-Pathogen Interactions
- The Plant Pathology Degree Program
  - Fungal genetics and biology
  - Infection-related morphogenesis
  - Physiology, genetics and molecular aspects of host-pathogen interactions
  - Epidemiology
  - Plant disease management
  - Biological control
  - Mechanisms of disease resistance
  - Bioinformatics
  - Molecular Virology
- The Weed Science Degree Program
  - Weed Ecology
  - Herbicide Mode of Action
  - Herbicide Resistance
  - Physiological and Molecular Biology
  - Biological Control
  - Efficacy of Herbicides and Mixtures
Sustainable Agriculture
Specialized Application Technology
Weed Management Systems
Invasive Weed Ecology and Control

Regular Graduate Faculty by Rank:

Professor

Mary Catherine Aime
Janna L. Beckerman
Zhixiang Chen
Kevin D. Gibson
Stephen B. Goodwin
Anjali S. Iyer-Pascuzzi
Gurumukh S. Johal
William G. Johnson
Tesaraye Mengiste
Michael V. Mickelbart
Robert E. Pruitt
Chris Staiger
Daniel B. Szymanski
Jin-Rong Xu
Bryan G. Young

Associate Professor

Sharon Kessler
Damon R. Lisch
Sue Loesch-Fries
Scott McAdam
Gyeong Mee Yoon
Darcy Telenko
Yun Zhou

Assistant Professor

Leonor Boavida
Thomas Butts
Guohong Cai
Christian Cruz
Jeneen Fields
Morgan Furze
Lee Miller
Chris Oakley
Lei Zhang

Emeritus Faculty
Master of Science

Botany and Plant Pathology, MS

Concentrations:

- Botany
- Chromatin Regulation Gene Expression - PULSe
- Computational Life Science
- Interdisciplinary Ecological Science & Engineering
- Integrative Plant Science-PULSe
- Mol Evolut Genetics-PULSe
- Molecular Virology-PULSe
- Microbiology-PULSe
- Mycology
- Peace Corp Msts Intl-IESE
- Plant Biology-PULSe
- Plant Cell Biology
- Plant Genetics
- Plant Molecular Biology
- Plant Physiology
- Plant Protection
- Plant Pathology
- Plant Virology
- Virology
- Weed Science

Doctor of Philosophy
Botany and Plant Pathology, PHD

Concentrations:

- Biochemistry-Molecular Biology
- Botany
- Chromatin Regulation Gene Expression - PULSe
- Computational Life Science
- Interdisciplinary Ecological Science & Engineering
- Interdisciplinary Genetics
- Integrative Plant Sci-PULSe
- Molecular Evolutionary Genetics - PULSe
- Molecular Virology-PULSe
- Microbiology-PULSe
- Mycology
- Plant Biochem & Molec Biol
- Plant Biology-PULSe
- Plant Cell Biology
- Plant Cell & Develop Biol
- Plant Ecology, Evolution and Systematics
- Plant Genetics
- Plant Molecular Biology
- Plant Physiology
- Plant Protection
- Plant Pathology
- Plant Virology
- Virology
- Weed Science

Department of Entomology (Graduate)

Website URL:

http://www.entm.purdue.edu/prospective-grads/index.html

Department/School Head:

Dr. Catherine A. Hill

Academic Programs:
Master's and Ph.D. Programs

Entomology has been a core component of Purdue University and the College of Agriculture since 1884. Our students study traditional areas of insect biology (molecular biology, behavior, systematics, ecology, pest management), as well as contemporary subjects and solutions related to grand societal challenges (health, environment & energy sustainability). As part of their graduate programs, our students also participate in multi-disciplinary work, leadership activities throughout the university, and participate in the teaching and extension missions.

- Doctor of Philosophy (Ph.D.) & Master of Science (M.S.) Website

Concentrations (Areas of Study):

- Biological control
- Insect biochemistry and cell biology
- Insect-plant interactions
- Integrated pest management
- Landscape ecology
- Molecular, behavioral, and population genetics
- Systematic Entomology
- Urban and industrial entomology
- Vector biology

Regular Graduate Faculty by Rank:

Professor

Dieudonné Baributsa
Stephen Cameron
Matthew D. Ginzel
Catherine A. Hill
Ian Kaplan
Christian H. Krupke
Linda Mason
Barry Pittendrigh
Douglas Scott Richmond

Associate Professor

Grzegorz A. Buczkowski
John Couture
Laramy Enders
Ameya D. Gondhalekar
Brandy Schemerhorn
Aaron Smith

Assistant Professor
Master of Science

Entomology, MS

Concentrations:

- Chemical Biology - PULSe
- Immunology and Infectious Diseases - PULSe
- Interdisciplinary Ecological Science & Engineering
- Membrane Biology - PULSe
- Microbiology - PULSe

Doctor of Philosophy

Entomology, PHD

Concentrations:

- Chemical Biology - PULSe
- Immunology and Infectious Diseases - PULSe
- Integrated Neuroscience - PULSe
- Interdisciplinary Ecological Science & Engineering
- Interdisciplinary Genetics
- Membrane Biology - PULSe
- Microbiology - PULSe
- Molecular Evolutionary Genetics - PULSe

Department of Food Science (Graduate)

Website URL:
Food science is an all-encompassing major that is centered on enriching and improving food through increased food safety, novel processing techniques, nutritional benefits, and food functionality. To achieve these goals, Purdue's Food Science graduate program focuses on four signature areas: Food Chemistry Structure and Function; Foods for Health; Food Safety and Microbiology; Food Processing and Technology Development. Students from diverse academic backgrounds join the department to conduct research in one of these areas under the mentoring of outstanding faculty members. After earning graduate degrees, they pursue careers in academia, government agencies or industry.

Concentrations (Areas of Study):

Food Chemistry, Structure and Function, Food Safety and Microbiology, Foods for Health, Food Processing and Technology Development

Regular Graduate Faculty by Rank:

**Professor**
Dr. Bruce Applegate
Dr. Arun Bhunia
Dr. Christian Butzke
Dr. Bruce Hamaker
Dr. Kee Hong Kim
Dr. Jozef Kokini
Dr. Lisa Mauer
Dr. Haley Oliver
Dr. Senay Simsek
Dr. Yuan Yao

**Associate Professor**
Dr. Carlos Corvalan
Dr. Amanda Deering
Dr. Yaohua "Betty" Feng
Dr. Jen-Yi Huang
Dr. Owen Jones
Dr. Andrea Liceaga
Dr. Stephen Lindemann
Dr. Dharmendra Mishra
Dr. Lavanya Reddivari
Dr. Brad Reuhs
Dr. Fernanda San Martin

Assistant Professor
Dr. Da Chen
Dr. Eun Joong Oh
Dr. Deandrae Smith
Dr. Weicang Wang

Emeritus Faculty
Dr. James BeMiller
Dr. Rengaswami Chandrasekaran
Dr. Jay Marks
Dr. Philip E. Nelson
Dr. Suzanne Nielsen

Master of Science

Food Science, MS

Concentrations:

- Food Chemistry
- Foods for Health
- Food Microbiology
- Food Processing
- Interdepartmental Food Science
- Microbiology - PULSe

Doctor of Philosophy

Food Science, PHD

Concentrations:

- Food Chemistry
- Food Microbiology
- Food Processing
- Foods for Health
- Interdepartmental Food Science
- Microbiology - PULSe
Department of Forestry and Natural Resources (Graduate)

Website URL:

https://ag.purdue.edu/fnr/Pages/GraduateStudiesFNR.aspx

Department/School Head:

Jessica Gurevitch

Academic Programs:

Master's and Ph.D. Programs

We offer graduate study leading to the degrees of Master of Science, and Doctor of Philosophy in Fisheries and Aquatic Sciences, Forest Biology, Forest Measurement, and Assessment/GIS, Genetics, Natural Resource Social Science, Wildlife Science, Wood Products and Wood Products Manufacturing.

Regular Graduate Faculty by Rank:

Professor

Paul B. Brown
J. Andrew DeWoody
John B. Dunning Jr.
Songlin Fei
Rado Gazo
Matthew D. Ginzel
Jessica Gurevitch
Eva Haviarova
Tomas O. Hook
Jason Hoverman
Douglass F. Jacobs
Michael A. Jenkins
Zhao Ma
Bryan C. Pijanowski
Linda S. Prokopy
Maria S. Sepúlveda
Guofan Shao
Robert K. Swihart
Robert Wagner
Rod N. Williams
Patrick A. Zollner

Associate Professor

Mark Christie
John Couture
Elizabeth Flaherty
Reuben R. Goforth
Brady Hardiman
Jingjing Liang
Michael R. Saunders
Mo Zhou

Assistant Professor

Jacob Hosen
Morgan Furze
Dylan Wainwright

Research Assistant Professor

Paris D. Collingsworth
Stuart Carlton
Elin Jacobs

Clinical Engagement Associate Professor

Kwamena Quagrainie

Concentration

Wildlife Science Concentration for Forestry and Natural Resources (Graduate)

Master of Science

Forestry & Natural Resources, MS
Concentrations:

- Computational Life Science
- Computational Science
- Fisheries & Aquatic Sciences
- Forest Biology
- Forestry Measurement and Assessment/GIS
- Genetics
- Integrative Plant Science - PULSe
- Interdisciplinary Ecological Science & Engineering
- Molecular Evolutionary Genetics - PULSe
- Molecular Signaling and Cancer Biology - PULSe
- Natural Resource Social Science
- Peace Corp Msts
- Plant Biology - PULSe
- Intl-IESE
- Wildlife Science
- Wood Products and Wood Products Manufacturing

Master of Science in Forestry

Forestry & Natural Resources, MSFOR

Concentrations:

- Fisheries & Aquatic Sciences
- Forest Biology
- Forestry Measurement and Assessment/GIS
- Natural Resource Social Science
- Plant Biology-PULSe
- Wildlife Science
- Wood Products and Wood Products Manufacturing

Doctor of Philosophy

Forestry & Natural Resources, PHD

Concentrations:

- Computational Life Science
- Computational Science
- Fisheries & Aquatic Sciences
- Forest Biology
Welcome to the Horticulture and Landscape Architecture graduate program in the Department of Horticulture and Landscape Architecture at Purdue University. The HLA graduate program offers the thesis-based degrees of Doctor of Philosophy (Ph.D.) and Master of Science (M.S.), Master of Science in Landscape Systems and Design (M.S.). Reflecting the research interests of our faculty, graduate students in the HLA graduate program have projects that explore fundamental concepts of plant biology, applied aspects of horticulture and landscape architecture, or that integrate basic plant science with field and contained environment studies. The goal of the HLA Graduate Program is to prepare students for professional careers in landscape design, basic and applied plant science and their economics and marketing with an emphasis on the improvement of food, fiber, fuel, ornamental crops, horticultural economics/marketing, and other related topics.

Concentrations (Areas of Study):

Faculty in the program conduct extramurally-funded research on such topics as:

- Biotechnology
- Controlled environment agriculture
- Horticultural Economics and Marketing
- Horticulture Social Sciences
• Landscape Systems and Design
• Plant breeding & genome engineering
• Plant epigenetics
• Plant interactions with soil microbial communities
• Plant mineral nutrition
• Plant secondary metabolism
• Postharvest physiology
• Regulation of plant architecture and reproduction
• Specialty crop production
• Stress tolerance in crop plants
• Turf grass science
• Weed science & technology

Regular Graduate Faculty by Rank:

Professor

Cale A. Bigelow
Ray A. Bressan
Michael N. Dana
Natalia Dudareva
Steve G. Hallett
Avtar K. Handa
Peter M. Hirst
Lori Hoagland
Cary A. Mitchell
Kathryn S. Orvis
Aaron J. Patton
Linda Prokopy
Kashchandra G. Raghothama
Paul Siciliano

Associate Professor

David Barbarash
Celina Gomez
Ying Li
Krishna Nemali
Sean Rotar
Aaron Thompson
Ariana Torres
Josh Widhalm

Assistant Professor

Moriah Bilenky
Yiwei Huang
Stephen Meyers  
Kranthi Varala

Clinical Professor

Elizabeth Maynard  
Wenjing Guan

Clinical Associate Professor

Concentration

Landscape Systems and Design Concentration for Horticulture (Graduate)

Concentration Requirements (26 credits)

- GRAD 61200 - Responsible Conduct Of Research Credits: 1.00
- HORT 60100 - Planning And Presenting Plant Science Research Credits: 1.00
- HORT 60200 - Horticulture Research Seminar Credits: 1.00 (taken twice) - Credit Hours: 2.00
- HORT 60300 - Grants And Grantsmanship Credits: 1.00
- HORT 69500 - Horticulture Seminar Credits: 0.00
- Analytical Tools Courses - Credit Hours: 5.00
- Additional Courses (determined by Advisory Committee) - Credit Hours: 16.00

Master of Science

Horticulture, MS

Concentrations:

- Computational Life Sciences
- Economics & Marketing
- Integrative Plant Science - PULSe
- Interdisciplinary Ecological Science & Engineering
- Membrane Biology - PULSe
- Microbiology - PULSe
- Molecular Biology & Cell Physiology
Landscape Systems and Design, MS (Graduate)

As an environmental design discipline, landscape architecture holistically integrates a multitude of natural sciences, social and behavioral sciences, and creative arts dimensions into analysis and design of living environments. As such, it can be called an 'interdisciplinary discipline' that synthesizes various disciplines with creative approaches to problem-solving for natural and built systems and environments. It is into this interdisciplinary learning environment that we encourage applicants with a background in landscape architecture (BS or BA), practicing landscape architects, or individuals from allied disciplines who share a common vision for tackling challenging problems shaping our built environment. Thus, in keeping with Purdue's global reputation as a 'Research-One' university, and HLA's highly prominent research, the faculty of the landscape architecture program invite those seeking a personalized education in design research to join our MS in Landscape Systems & Design.

Doctor of Philosophy

Horticulture, PHD

Concentrations:

- Biochemistry-Molecular Biology
- Computation Life Sciences
- Ecological Science & Engineering
- Integrative Plant Science - PULSe
- Interdisciplinary Ecological Science & Engineering
- Interdisciplinary Genetics
- Membrane Biology - PULSe
- Microbiology - PULSe
- Molecular Biology & Cell Physiology
- Molecular Evolutionary Genetics - PULSe
- Plant Biochemistry & Molecular Biology
- Plant Biology - PULSe
- Plant Cell & Developmental Biology
- Plant Ecology, Evolution and Systematics
- Plant Genetics
- Plant Physiology
- Production & Environmental Horticulture
- Weed Science