Plant Genetics, Plant Breeding & Biotechnology

PURDUE UNIVERSITY

Agronomy Department / College of Agriculture

COA-AGRY-BS / Major: PGBB 201710
120 Credits for graduation

Name:_____ **PUID:**_____ **Date:** _____

Required Major Courses (18 credits)

_____ (3) AGRY 25500[CC] Soil Science
_____ (3) AGRY 28500 World Crop Adaptation and Distribution
_____ (3) AGRY 32000 Genetics
_____ (1) AGRY 32100 Genetics Laboratory
_____ (1) AGRY 39800 Agronomy Seminar
_____ (3) AGRY 48000 Plant Genetics
_____ (1) AGRY 49800 Agronomy Senior Seminar
_____ (3) AGRY 52000 Principles and Methods of Plant Breeding

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

_____ (0.5) AGR 10100 Introduction to the College of Agriculture and Purdue University
_____ (0.5) AGR 11300 Introduction to Agronomy Academic Programs
_____ (1) AGR 12500 Introduction to Plant Science
_____ (3/4) AGRY 52500 Crop Physiology and Ecology Or HORT 30100 Plant Physiology
_____ (3) BCHM 30700 Biochemistry
_____ (1) BCHM 30900 Biochemistry Laboratory
_____ (4) BIOL 11000 Fundamentals of Biology I
_____ (4) BIOL 11100 Fundamentals of Biology II Or BTNY 11000 Introduction to Plant Science
_____ (4) BIOL 22100 Introduction to Microbiology
_____ (3) BIOL 23100 Biology III: Cell Structure and Function or BTNY 42000 Plant Cellular and Developmental Biology
_____ (3) BIOL 41500 Introduction to Molecular Biology or BTNY 35000 Biotechnology in Agriculture
_____ (4) CHM 11500 General Chemistry (satisfies Science Selective for core)
_____ (4) CHM 11600 General Chemistry (satisfies Science Selective for core)
_____ (4) CHM 25700 Organic Chemistry
_____ (1) CHM 25701 Organic Chemistry Laboratory
_____ (3/5) MA 16010 Applied Calculus I (satisfies Quantitative Reasoning Selective for core) Or MA 16100 Plane Analytic Geometry and Calculus I
_____ (3/5) MA 16020 Applied Calculus II or MA 16200 Plane Analytic Geometry and Calculus II
_____ (3) STAT 30100 Elementary Statistical Methods (satisfies Information Literacy Selective for core)
_____ (3/4) PHYS 17200 General Physics Or PHYS 22000
_____ (4/3) PHYS 22100 General Physics or 24100 Electricity and Optics
_____ (3) Economics Selective (satisfies Human Culture Behavioral/Social Science for core) [4]
_____ (3) UCC Humanities Selective (satisfies Human Cultures Humanities for core)[1]
_____ (3) Humanities or Social Science Selective[3]
_____ (3) Humanities or Social Science Selective[3]
_____ (3) Humanities or Social Science Selective (30000+ level) [3]
_____ (12) Directed Selective[5]
_____ (4) ENGL 10600 First-Year Composition ***(satisfies Written Communication for core)***
_____ (3) COM 11400 or Fundamentals of Speech Communication ***(satisfies Oral Communication for core)***
COM 21700 Science Writing and Presentation
_____ (3) Written or Oral Communication Selective[2]

Electives (12 credits)

_____ (12) Elective

University Core Requirements (http://www.purdue.edu/provost/initiatives/curriculum/course.html)

Human Cultures Humanities	☐ _____	*Science, Technology & Society Selective*	☐ _____
Human Cultures Behavioral/Social Science	☐ _____	*Written Communication*	☐ _____
Information Literacy	☐ _____	*Oral Communication*	☐ _____
Science Selective	☐ _____	*Quantitative Reasoning*	☐ _____
Science Selective	☐ _____		

College of Agriculture & University Level Requirements (https://ag.purdue.edu/oap/Pages/core_requirements.aspx)

3 credits Multicultural Awareness _____

9 credits International Understanding _____ _____ _____

9 credits of Hum. And/or Social Sciences outside the College of Agriculture _____ _____ _____

3 credits of Hum. And/or Social Science at 30000 or higher _____

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Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
0.5	AGR 10100 Intro to the College of Agriculture and Purdue University		4	BIOL 11100 Fundamentals of Biology II or BTNY 11000 Introduction to Plant Science	BIOL 11000
0.5	AGR 11300 Introduction to Agronomy Academic Programs		4	CHM 11600 General Chemistry	CHM 11100
1	AGR 12500 Introduction to Plant Science		3/5	MA 16020 Applied Calculus II or MA 16200 Plane Analytic Geometry and Calculus II	MA 16010 or MA 16100
4	BIOL 11000 Fundamentals of Biology I		3	Elective*	
4	CHM 11500 General Chemistry	calculus			
4	ENGL 10600 First-Year Composition				
3/5	MA 16010 Applied Calculus I or MA 16100 Plane Analytic Geometry and Calculus I	ALEKS 75+ or ALEKS 85+			
17			**14**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	AGRY 32000 Genetics	BIOL 11100	3	AGRY 28500 World Crop Adaptation and Distribution	
1	AGRY 32100 Genetics Laboratory		4	CHM 25700 Organic Chemistry	CHM 11600
1	AGRY 39800 Agronomy Seminar		1	CHM 25701 Organic Chemistry Laboratory	
4	PHYS 17200 Modern Mechanics or PHYS 22000 General Physics*	MA 16010 or MA 16100	3	COM 11400 Fundamentals of Speech or COM 21700 Science of Writing and Presentation	
3	Economics Selective		4 or 3	PHYS 22100 General Physics or PHYS 24100 Electricity and Optics	PHYS 22000 or PHYS 17200
3	Directed Selective				
15			**14**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3	AGRY 25500 Soil Science	CHM 11200	4	BIOL 22100 Introduction to Microbiology	BIOL 11100
3	BCHM 30700 Biochemistry	CHM 25700	3	Directed Selective	
1	BCHM 30900 Biochemistry Laboratory	CHM 25700	6	Humanities or Social Science Selective	
3	BIOL 23100 Biology III: Cell Structure and Function or BTNY 42000 Plant Cellular and Developmental Biology	BIOL 11100 or BTNY 11000	3	Written or Oral Communication Selective	
3	UCC Humanities Selective				
13			**16**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	AGRY 48000 Plant Genetics	AGRY 32000	3 or 4	AGRY 52500 Crop Physiology and Ecology or HORT 30100 Plant Physiology	BIOL 11000, CHM 25700
1	AGRY 49800 Agronomy Senior Seminar		6	Directed Selective	BTNY 11000 or BIOL 11100
3	AGRY 52000 Principles and Methods of Plant Breeding	AGRY 32000	3	Humanities or Social Science Selective	
3	BIOL 41500 Introduction to Molecular Biology or BTNY 35000 Biotechnology in Agriculture	BIOL 23100 or BTNY	2	Electives	
3	STAT 30100 Elementary Statistical Methods				
3	Elective				
16			**14**		

1) 120 credits listed above are required for Bachelor of Science degree.
2) 2.0 Graduation GPA required for Bachelor of Science degree.
3) 32 credits of upper division courses (30000 level or higher) must be taken at Purdue University, West Lafayette.
4) ANY COURSE TAKEN AT PURDUE CAN BE ATTEMPTED NO MORE THAN THREE TIMES (INCLUSIVE OF W, WF, I AND IF).
5) CC = is considered a critical course

See next page for all supplemental Information

The student is ultimately responsible for knowing and completing all degree requirements.
myPurdue Plan is knowledge source for specific requirements and completion

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PGBB Supplemental Information

[1]University Core Curriculum Humanities Selective (3 credits)
See approved Humanities list at: http://www.purdue.edu/provost/initiatives/curriculum/course.html

[2]Written or Oral Communication Selective (3 credits)

ENGL 20000 - 59900	AGR 20100 Communicating Across Culture
COM 20000 -59900	YDAE 44000 Methods of Teaching Agriculture
ASL 10000 - 59900	Education

[3]Humanities and Social Science Selective (9 credits)
See approved list at: https://ag.purdue.edu/oap/pages/core-social_humanities.aspx

[4]Economics Selective (3 credits)

AGEC 20300 Introductory Microeconomics for Food and Agribusiness	AGEC 21700 Economics	ECON 25100 Microeconomics
AGEC 20400 Introduction to Resource Economics and Environmental Policy	ECON 21000 Principles of Economics	ECON 25200 Macroeconomics

[5]Directed Selectives (9 credits)

AGEC 22000 Economics of Agricultural Markets	AGRY 57300 Molecular Cytogenetics Lab	BTNY 31600 Plant Anatomy
AGEC 33000 Management Methods for Agricultural Business	ANSC 51100 Population Genetics	BTNY 51700 Diseases of Agronomic Crops
AGEC 33100 Principles of Selling in Agricultural Business	BCHM 56100 General Biochemistry I	BTNY 52500 Intermediate Plant Pathology
AGEC 42400 Financial Management of Agricultural Business	BCHM 56200 General Biochemistry II	BTNY 53500 Plant Disease Management
AGRY 33500 Weather and Climate	BIOL 42000 Eukaryotic Cell Biology	BTNY 55300 Plant Growth and Development
AGRY 36500 Soil Fertility	BIOL 44100 Biology Senior Seminar in Genetics	ENTM 20600 General Entomology
AGRY 37500 Crop Production Systems	BIOL 54200 Molecular Upper-Division Lab Course	ENTM 20700 General Entomology Lab
AGRY 50500 Forage Management	BTNY 30100 Introductory Plant Pathology	ENTM 51000 Insect Pest Management
AGRY 55000 Field crops Breeding Techniques	BTNY 30400 Introductory Weed Science	MA 26500 Linear Algebra
AGRY 57200 Molecular Cytogenetics	BTNY 30500 Fundamentals of Plant Classification	