Fall 2014

Plant Genetics, Breeding, and Biotechnology

https://ag.purdue/oap/Pages/major.aspx

120 credits required for graduation

	Credits	Course number	Course Title
Departmental/Program Major Courses (108 to 114 credits)			
	Required Major Courses (18 credits)		
_____	3	AGRY 25500	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 (90 to 96 credits) (See Agronomy 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 29000	Introduction to Plant Science
		AGRY 52500 or	
_____	3 or 4	HORT 30100	Crop Physiology and Ecology or Plant Physiology
_____	3	BCHM 30700	Organic Chemistry
_____	1	BCHM 30900	Organic Chemistry Laboratory
_____	4	BIOL 11000	Fundamentals of Biology I
		BIOL 11100 or	
_____	4	BTNY 11000	Fundamentals of Biology II or Introduction to Plant Science
_____	4	BIOL 22100	Introduction to Microbiology
		BIOL 23100 or	
_____	3	BTNY 42000	Biology III: Cell Structure and Function or Plant Cellular and Developmental Biology
		BIOL 41500 or	
_____	3	BTNY 35000	Introduction to Molecular Biology or 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	Crop Physiology and Ecology or Plant Physiology
_____	1	CHM 25701	Organic Chemistry
		MA 16010 or MA	Applied Calculus I or Plane Analytic Geometry and Calculus I (satisfies Quantitative
_____	3 or 5	16100	Reasoning Selective for core)
_____	3	STAT 30100	Elementary Statistical Methods (satisfies Information Literacy Selective for core)
		MA 16020 or MA	
_____	3 or 5	16200	Applied Calculus II or Plane Analytic Geometry and Calculus II
		PHYS 17200 or	
_____	4	PHYS 22000	General Physics
		PHYS 22100 or	
_____	4 or 3	24100	General Physics or Electricity and Optics
_____	3	_ _ _ _ _ _ _	Economics Selective (satisfies Human Culture Behavioral/Social Science for core)
_____	3	_ _ _ _ _ _ _	UCC Humanities Selective (satisfies Human Cultures Humanities for core)
_____	3	_ _ _ _ _ _ _	Humanities or Social Science Selective
_____	3	_ _ _ _ _ _ _	Humanities or Social Science Selective
_____	3	_ _ _ _ _ _ _	Humanities or Social Science Selective (30000+ level)
_____	9	_ _ _ _ _ _ _	Directed Selective
_____	4	ENGL 10600	First-Year Composition (satisfies Written Communication for core)
		COM 11400 or	Fundamentals of Speech Communication or Science Writing and Presentation (satisfies
_____	3	COM 21700	Oral Communication for core)
_____	3	_ _ _ _ _ _ _	Written or Oral Communications Selective
Electives (6 to 12 credits)			
_____	6 to 12	_ _ _ _ _ _ _	Elective (credits required depend on Math, Physics, & Physiology course choices)

University Core Requirements:

Human Cultures Humanities: _____ *Science, Technology, and Society:* _____
Human Cultures Behavioral/Social Science: _____ *Written Communication:* _____
Information Literacy: _____ *Oral Communication:* _____
Science #1: _____ *Quantitative Reasoning:* _____
Science #2: _____

120 semester credits required for Bachelor of Science degree.
2.0 GPA required for Bachelor of Science degree.

College of Agriculture & University Level Requirements:

2.0 GPA required for Bachelor of Science degree.
32 Upper division credits taken from Purdue
9 credits International Understanding: _____ _____ _____
3 credits Multicultural Awareness: _____
9 credits of Hum and/or Social Sciences outside the College of Agriculture: _____ _____ _____

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Credits	Course number	Course Title	Prerequisites	Credits	Course number	Course Title	Prerequisites
	Fall 1st Year				**Spring 1st Year**		
0.5	AGR 10100	Introduction to the College of Agriculture and Purdue University		4	BIOL 11100 or BTNY 11000	Fundamentals of Biology II or Introduction to Plant Science	BIOL 11000
0.5	AGR 11300	Introduction to Agronomy Academic Programs		4	CHM 11600	General Chemistry	CHM 11500
1	AGR 29000	Introduction to Plant Science		3 or 5*	MA 16020 or MA 16200	Applied Calculus II or 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	pre/co: calculus				
4	ENGL 10600	First-Year Composition					
3 or 5*	MA 16010 or MA 16100	Applied Calculus I or Plane Analytic Geometry and Calculus I*	ALEKS 75+ or ALEKS 85+				
17				**14**			
	Fall 2nd Year				**Spring 2nd Year**		
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 or PHYS 22000	Modern Mechanics or General Physics*	MA 22300 or MA 16100	3	COM 11400 or COM 21700	Fundamentals of Speech or Science of Writing and Presentation	
3	_ _ _ _ _ _ _	Economics Selective		4 or 3*	PHYS 22100 or PHYS 24100	General Physics or Electricity and Optics*	PHYS 22000 or PHYS 17200
3	_ _ _ _ _ _ _	Directed Selective					
15				**14**			
	Fall 3rd Year				**Spring 3rd Year**		
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 or BTNY 42000	Biology III: Cell Structure and Function or Plant Cellular and Developmental Biology	BIOL 11100 or BTNY 11000	3	_ _ _ _ _ _ _	Written or Oral Communication Selective	
3	_ _ _ _ _ _ _	UCC Humanities Selective					
13				**16**			
	Fall 4th Year				**Spring 4th Year**		
3	AGRY 48000	Plant Genetics	AGRY 32000	3 or 4*	AGRY 52500 or HORT 30100	Crop Physiology and Ecology or Plant Physiology	
1	AGRY 49800	Agronomy Senior Seminar		3	_ _ _ _ _ _ _	Directed Selective	
3	AGRY 52000	Principles and Methods of Plant Breeding	AGRY 32000	3	_ _ _ _ _ _ _	Humanities or Social Science Selective (30000+ level)	
3	BIOL 41500 or BTNY 35000	Introduction to Molecular Biology or Biotechnology in Agriculture	BIOL 23100 or BTNY 42000	6*	_ _ _ _ _ _ _	Electives	
3	STAT 30100	Elementary Statistical Methods					
3*	_ _ _ _ _ _ _	Elective					
16				**15**			

120 semester credits required for Bachelor of Science degree.
2.0 GPa required for Bachelor of Science degree.

The highlighted course is considered critical; timely progress toward the degree depends upon steady progress through each course in the plan of study, but this course, in particular, should be completed by the semester indicated.

Consultation with an advisor may result in an altered plan customized for an individual student.

Official and complete prerequisite lists are in the course catalog; the incomplete listing presented here regards this program and course sequencing.