

Plant Genetics, Breeding, and Biotechnology

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

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 Introductory Analysis II or	CHM 11500
1	AGR 29000	Introduction to Plant Science		3 or 5*	MA 22400 or MA 16200	Plane Analytic Geometry and Calculus II*	MA 22300 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 22300 or MA 16100	Plane Analytic Geometry and Calculus I*	ALEKS 65+ or ALEKS 75+				
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	Fundamentals of Speech Communication	
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.

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

*The higher credit options within Calculus, Physics, and Physiology course choices reduce Elective credit requirements.

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
_____	4	BIOL 11000	Fundamentals of Biology I
_____		BIOL 11100 or	
_____	4	BTNY 11000	Fundamentals of Biology II or Introduction to Plant Science
_____	4	CHM 11500	General Chemistry (satisfies Science Selective for core)
_____	4	CHM 11600	General Chemistry (satisfies Science Selective for core)
_____		MA 22300 or MA	Introductory Analysis 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 22400 or MA	
_____	3 or 5	16200	Introductory Analysis 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
_____	4	ENGL 10600	First-Year Composition (satisfies Written Communication for core)
_____	3	COM 11400	Fundamentals of Speech Communication (satisfies Oral Communication for core)
_____	3	-----	Written or Oral Communications Selective
_____	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)
_____	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 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 25700	Crop Physiology and Ecology or Plant Physiology
_____	1	CHM 25701	Organic Chemistry
_____	9	-----	Directed Selective

Electives (6 to 12 credits)

6 to 12 ----- Elective (credits required depend on Math, Physics, & Physiology course choices)

University Core Requirements:

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

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