

MAJOR IN SOIL AND CROP SCIENCES, PLANT BIOTECHNOLOGY, GENETICS, AND BREEDING CONCENTRATION

Requirements Effective Fall 2019

Freshman

		AUCC	Credits
AGRI 192 or 292	Orientation to Agricultural Systems Transfer Seminar		1
CHEM 111	General Chemistry I (GT-SC2)	3A	4
CHEM 112	General Chemistry Lab I (GT-SC1)	3A	1
CHEM 113	General Chemistry II		3
CHEM 114	General Chemistry Lab II		1
CO 150	College Composition (GT-CO2)	1A	3
LIFE 102	Attributes of Living Systems (GT-SC1)	3A	4
LIFE 103	Biology of Organisms-Animals and Plants (GT-SC1)	3A	4
MATH 124	Logarithmic and Exponential Functions (GT-MA1)	1B	1
MATH 125	Numerical Trigonometry (GT-MA1)	1B	1
MATH 126	Analytic Trigonometry (GT-MA1)	1B	1
MATH 155	Calculus for Biological Scientists I (GT-MA1)	1B	4
SOCR 100	General Crops		4
Total Credits			32

Sophomore

Select one from the following:			3
AGRI 116/IE 116	Plants and Civilizations (GT-SS3)	1C	
AGRI 270/IE 270	World Interdependence-Population and Food (GT-SS3)	1C	
AREC 202	Agricultural and Resource Economics (GT-SS1)	3C	3
CHEM 245	Fundamentals of Organic Chemistry		4
CHEM 246	Fundamentals of Organic Chemistry Laboratory		1
FSHN 125 or 150	Food and Nutrition in Health Survey of Human Nutrition		2-3
PH 110	Physics of Everyday Phenomena (GT-SC2)	3A	3
PHIL 110	Logic and Critical Thinking (GT-AH3)	3B	3
SOCR 240	Introductory Soil Science		4
SOCR 330	Principles of Genetics		3
SPCM 200	Public Speaking		3
Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)		3D	3
Total Credits			32-33

Junior

BC 351	Principles of Biochemistry		4
BZ 310	Cell Biology		4

2 Major in Soil and Crop Sciences, Plant Biotechnology, Genetics, and Breeding Concentration

JTC 300	Strategic Writing and Communication (GT-C03)	2	3
STAT 301 or 307	Introduction to Applied Statistical Methods Introduction to Biostatistics		3
Select eight credits from the following:			8
BC 463	Molecular Genetics		
BSPM 450	Molecular Plant-Microbe Interaction		
BSPM 451			
BZ 346	Population and Evolutionary Genetics		
BZ 476/BZ 576	Genetics of Model Organisms		
HORT 401	Medicinal and Value-Added Uses of Plants		
HORT 424/SOCR 424	Topics in Organic Agriculture		
HORT 451	Vegetable Crop Management		
HORT 453	Principles of Fruit Crop Management		
MIP 300	General Microbiology		
MIP 450	Microbial Genetics		
Select two groups from the following:			6
Group A:			
BSPM 302	Applied and General Entomology		
BSPM 303C	Entomology Laboratory: Agricultural		
Group B:			
BSPM 308	Ecology and Management of Weeds		
Group C:			
BSPM 361	Elements of Plant Pathology		
Electives ¹			3
Total Credits			31
Senior			
BZ 440	Plant Physiology		3
SOCR 486	Practicum	4C	1
SOCR 492	Preparing for Impact--Your Career Journey	4A	1
Select one from the following:			3
HORT 460/SOCR 460	Plant Breeding and Biotechnology	4A,4B,4C	
SOCR 430		4A,4B,4C	
Soil and Crop Electives			8
Select a minimum of 8 credits from the following suggested courses:			
SOCR 344	Crop Development Techniques		
SOCR 350	Soil Fertility Management		
SOCR 370	Climate-Smart Irrigation Principles		
SOCR 377	Geographic Information Systems in Agriculture		
SOCR 410	Seed Processes: Storage and Deterioration		
SOCR 412	Seed Processes: Separation and Conditioning		
SOCR 421	Agroecosystem Management		
SOCR 455	Microbiomes of Soil Systems		
SOCR 475	Global Challenges in Plant and Soil Science		
SOCR 495	Independent Study		
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)		3B	3
Electives ¹			5-6
Total Credits			24-25
Program Total Credits:			120

¹ Select enough elective credits to bring the program total to 120, with a minimum of 42 upper division credits.