

**DEPARTMENT OF SOIL AND CROP SCIENCES**  
**Concentration: Plant Biotechnology, Genetics and Breeding**

Name \_\_\_\_\_ Telephone \_\_\_\_\_  
 Local Address \_\_\_\_\_  
 Advisor \_\_\_\_\_ Graduation Term \_\_\_\_\_ Year \_\_\_\_\_  
 Degree Requirements: 120 credits, 42 upper division, 27 Soil and Crop Sciences

**FRESHMAN YEAR**

<u>Semesters Offered</u>		<u>Credits</u>
F S	___AGRI 192/292 Orientation to Ag. Systems	1
F S SS	___LIFE 102 Attributes of Living Systems	4
F S SS	___LIFE 103 Biology of Organisms-Animals and Plants	4
F S SS	___CHEM 111 General Chemistry I	4
F S SS	___CHEM 112 General Chemistry Lab I	1
F S SS	___CHEM 113 General Chemistry II	3
F S SS	___CHEM 114 General Chemistry Lab II	1
F S SS	___CO 150 College Composition	3
F S SS	___MATH 124 Logarithmic/Exponential Function	1
F S SS	___MATH 125 Numerical Trigonometry	1
F S SS	___MATH 126 Analytic Trigonometry	1
F S SS	___MATH 155 Calculus for Biological Scientists I	4
F	___SOCR 100 General Crops	4
	Total	32

**SOPHOMORE YEAR**

<u>Semesters Offered</u>		<u>Credits</u>
F S	___AGRI/IE 116 <sup>4</sup> Plants & Civilization	3
	or	
S	___AGRI/IE 270 <sup>4</sup> World Interdependence - Population & Food	3
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F S	___FSHN 125 Food & Nutrition in Health	2
	or	
F S SS	___FSHN 150 Survey of Human Nutrition	3
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F S	___SOCR 330 Principles of Genetics	3
F S SS	___CHEM 245 Fund of Organic Chemistry	4
F S	___CHEM 246 Fund of Organic Chem Lab	1
F S	___AREC 202 <sup>2</sup> Ag & Resource Economics	3
F S SS	___PH 110 Descriptive Physics	3
F S	___SOCR 240 Introductory Soil Science	4
F S SS	___SPCM 200 Public Speaking	3
F S SS	___PHIL 110 <sup>1</sup> Logic & Critical Thinking	3
F S SS	___Historical Perspectives <sup>3</sup>	3
	Total	32-33

<sup>1</sup>Select from list of courses in category 3B in the AUCC.<sup>2</sup>Select from list of courses in category 3C in the AUCC.<sup>3</sup>Select from list of courses in category 3D in the AUCC.<sup>4</sup>Select from list of courses in category 3E in the AUCC.<sup>5</sup>Select from departmental list<sup>6</sup>Select from electives list<sup>7</sup>Capstone Course<sup>8</sup>Prereq is BZ 350 or LIFE 201B – with a C or better.**JUNIOR YEAR**

<u>Semesters Offered</u>		<u>Credits</u>
F S SS	___BC 351 Principles of Biochemistry	4
F S SS	___JTC 300 Technical Communication	3
F S SS	___BZ 310 Cell Biology	4
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F S SS	___STAT 301 Intro to Statistical Methods	3
	or	
F S SS	___STAT/ERHS 307 Intro to Biostatistics	3
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	<i>Select two of the following courses:</i>	
F	___BSPM 302 Applied/General Entomology	2
F (even)	___BSPM 303C Ag Entomology Lab	1
	or	
S	___BSPM 361 Elements of Plant Pathology	3
	or	
F	___BSPM 308 Ecology and Mgmt of Weeds	3

*Select eight (8) credits from the following:*

F	___BC 463 <sup>8</sup> Molecular Genetics	3
S (even)	___BSPM 450 Molecular Plant-Microbe Int.	3
S (odd)	___BSPM 451 Integrated Pest Management	3
F	___BZ 346 Popul & Evolution Genetics	3
S	___BZ 402 Molecular Cytogenetics	4
F (even)	___BZ 476 Topics in Advanced Genetics	3
S (even)	___HORT 401 Med & Value Added Plants	3
S (even)	___HORT/SOCR 424 Topics in Organic Ag	3
F	___HORT 450 A-D Horticulture Food Crops	1
F S SS	___MIP 300 General Microbiology	3
F	___MIP 450 Microbial Genetics	3

___ Electives	3
Total	31

**SENIOR YEAR**

<u>Semesters Offered</u>		<u>Credits</u>
F (even)	___SOCR 430 <sup>7</sup> Applications of Plant Biotech	3
	Or	
F (odd)	___SOCR/HORT 460 <sup>7</sup> Plant Breeding	3
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S	___BZ 440 Plant Physiology	3
F S SS	___SOCR 486 Practicum	1
F	___SOCR 492 Seminar	1
F S SS	___Arts and Humanities <sup>1</sup>	3
F S SS	___Soil and Crop Electives <sup>5</sup>	8
F S SS	___Electives <sup>6</sup>	6
	Total	27-28

**Suggested Department Electives**

Eight (8) credits of Soil and Crop Sciences electives are required for the Plant Biotechnology, Genetics and Breeding Concentration. Choose any combination of the following suggested courses to meet this requirement:

		<u>Credits</u>
S (even)	SOCR 344 Crop Development Techniques	1
F	SOCR 350 Soil Fertility Management	3
S	SOCR 370 Irrigation Principles	3
F	SOCR 377 GIS in Agriculture	3
F S SS	SOCR 410 Seed Processes: Storage & Deterioration	1
F S SS	SOCR 411 Seed Processes: Large Seeded Legume Seed Production	1
F S SS	SOCR 412 Seed Processes: Separation and Conditioning	1
F	SOCR 421 Crop and Soil Management Systems II	4
F	SOCR 455 Soil Microbiology	3
S (E)	SOCR 475 Global Challenges in Plant & Soil Science	3
F S SS	SOCR 487 Internship	variable
F S SS	SOCR 495 Independent Study	variable

**Electives**

Select from Colleges of:

Agricultural Sciences

Natural Sciences (e.g., BZ 441 Plant Physiology Lab)

Applied Human Sciences

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