

# AGRICULTURE, BACHELOR OF SCIENCE (508)

## Program Coordinator

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The major in agriculture (508) consists of several concentrations allowing students to specialize in areas of interest such as Agronomy, Agribusiness, Agricultural Education, Agricultural Systems, Animal Science, Dairy Science, Horticulture, Horse Science, and Turf and Golf Course Management.

## Concentrations

- Agribusiness (AGBU)
- Agriculture Education (AGED)
- Agronomy Plant (AGPS)
- Agronomy Soil (AGSS)
- Animal Science (AGAS)
- Horse Science (AGHS)
- Dairy Science (AGDS)
- General Agriculture (AGGA)
- Horticulture (AGHO)
- Turf & Golf Course Management (AGTG)
- Agriculture Systems (AGSY)

## Program Requirements (36-77 hours)

A baccalaureate degree requires a minimum of 120 unduplicated semester hours. More information can be found at [www.wku.edu/registrar/degree\\_certification.php](http://www.wku.edu/registrar/degree_certification.php). ([https://www.wku.edu/registrar/degree\\_certification.php](https://www.wku.edu/registrar/degree_certification.php))

Students who began WKU in the Fall 2014 and thereafter should review the Colonnade requirements located at: <https://www.wku.edu/colonnade/colonnaderequirements.php>. (<https://www.wku.edu/colonnade/colonnaderequirements.php>)

This major in agriculture requires a minimum of 36-77 semester hours in agriculture and leads to a Bachelor of Science degree. Electives are chosen from agriculture courses focusing on a concentration, when approved by an assigned advisor, complete the minimum total of 36-77 semester hours in agriculture. At least half of the semester hours in the major must be in courses numbered 300 or above. All students must take the following courses outside of the major:

## Required Courses Outside of the Major

Code	Title	Hours
<b>Mathematics Course</b>		
MATH 115	Applied College Algebra (or higher) <sup>1</sup>	3
<b>Chemistry Courses</b>		
Select two of the following:		6
CHEM 105	Fundamentals of General Chemistry	
CHEM 107	Fundamentals of Organic Chemistry	
CHEM 120	College Chemistry I	
CHEM 222	College Chemistry II	
<b>Chemistry Labs</b>		

Select two hours of the following:		2
CHEM 106	Fundamentals of General Chemistry Laboratory	
CHEM 108	Fundamentals of Organic Chemistry Laboratory	
CHEM 121	College Chemistry I Laboratory	
CHEM 223	College Chemistry II Laboratory	
<b>Biology Course and Lab <sup>2</sup></b>		
BIOL 120	Biological Concepts: Cells Metabolism and Genetics	3
BIOL 121	Biological Concepts: Cells, Metabolism, and Genetics Lab	1
<b>Total Hours</b>		<b>15</b>

<sup>1</sup> Students focusing in Pre-Veterinary Medicine must take MATH 116 or higher.

<sup>2</sup> Students pursuing the Horticulture Concentration may take BIOL 120 and BIOL 121 or BIOL 122 and BIOL 123.

The following courses are required for each concentration:

## Agribusiness Concentration

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following:		3
AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Agribusiness Courses</b>		
AGEC 261	Agricultural Accounting	3
AGEC 361	Farm Management	3
AGEC 362	Agricultural Marketing	3
AGEC 366	Agricultural Sales and Services	3
AGEC 463	Agriculture Finance	3
<b>Agribusiness Elective</b>		

Select 6 hours of upper-level agriculture electives: AGECE, AGED, AGMC, AGRI, AGRO, ANSC, or HORT 6

**Total Hours 50**

## Agricultural Education Concentration

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGMC 171	Introduction to Agricultural Mechanization Laboratory	1
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following:		3
AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Teacher Certification Requirements</b>		
AGED 250	Introduction to Teacher Education in Agriculture <sup>1</sup>	3
or EDU 250	Discover Teaching: Introduction to Teacher Education	
PSY 310	Educational Psychology: Development and Learning <sup>1</sup>	3
EDU 260	Classroom Assessment	3
EDU 350	Student Diversity and Differentiation	3
EDU 360	Behavior and Classroom Management in Education	3
EDU 489	Student Teaching Seminar	2,3
AGED 200	Foundations of Agricultural Education	1
AGED 300	Youth Development for Agricultural Educators	3
AGED 470	Methods of Teaching in Agricultural Education	3
AGED 471	Organization and Planning in Agricultural Education	3
AGMC 371	Agricultural Mechanics	1
AGMC 372	Agricultural Mechanics Laboratory	2
HORT 316	Greenhouse Maintenance and Operation	2

HORT 317	Greenhouse Maintenance and Operation Laboratory	1
SPED 330	Introduction to Exceptional Education: Diversity in Learning	3
LTCY 497	Literacy Competencies for Middle and High School Classroom Teachers	0
AGRI 398	Seminar	1
SEC 490	Student Teaching	10

**Total Hours 76-77**

<sup>1</sup> Courses require a grade of C or better.

## Agriculture Systems Concentration

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following:		3
AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Agriculture Systems Courses</b>		
AGMC 373 & AGMC 374	Farm Power—Mechanical and Machinery and Farm Power—Mechanical and Machinery Laboratory	3
AGMC 377 & AGMC 378	Farm Machinery and Farm Machinery Laboratory	3
AGMC 425	Applied Hydraulics and Pneumatics	3
AGEC 366	Agricultural Sales and Services	3
MFGE 227	Introduction to Manufacturing Methods	3
<b>Agriculture Systems Elective</b>		
Select 6 credit hours from any AGECE, AGED, AGMC, AGRI, AGRO, ANSC, or HORT course		6
<b>Total Hours</b>		<b>50</b>

**Agronomy (Plant Science) Concentration**

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following courses:		3
AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Agronomy – Plant Science Courses</b>		
Select 15 hours from following courses:		15
AGRO 310	Pest Management	
AGRO 352	Soil Fertility and Fertilizers	
AGRI 355	Biotechnology in Agriculture	
AGRO 409	Weed Science	
AGRO 410	Weed Science Laboratory	
AGRO 418	Plant Pathology	
AGRO 420	Forage Crop Management	
AGRO 421	Forage Crops Laboratory	
AGRO 422	Field Crops	
<b>Agronomy Electives</b>		
Select 3 credit hours from the following courses:		3
AGRI 315	Water in Food Production	
AGRI 369	Cooperative Education in Agriculture II	
AGRI 475	Selected Topics in Agriculture	
AGRO 452	Soil Microbiology	
AGRO 454	Soil Management and Conservation	
AGRO 457	Soil Formation, Classification and Mapping	
AGRO 458	Soil Formation, Classification and Mapping Laboratory	
AGRO 459	Techniques in Physical Soil Description	
AGRI 493	Sustainable Agriculture	
HORT 301	Introduction to Landscape Plants	
HORT 302	Introduction to Landscape Plants Laboratory	

HORT 313	Turfgrass Management	
HORT 316	Greenhouse Maintenance and Operation	
HORT 317	Greenhouse Maintenance and Operation Laboratory	
HORT 340	Greenhouse Crop Production	
HORT 407	Plant Propagation	
HORT 407G	Plant Propagation	
HORT 419	Fruit, Vegetable, and Vineyard Production	
AGEC 468	World Food Development	
AGEC 361	Farm Management	
AGMC 392	Turf Irrigation	
AGMC 393	Turf Irrigation Laboratory	
<b>Required Laboratories</b>		
AGRO 111	Plant Science Laboratory	1
AGRO 351	Soils Laboratory	1
<b>Total Hours</b>		<b>49</b>

**Agronomy (Soil Science) Concentration**

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following:		3
AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Required Agronomy Courses</b>		
AGRO 351	Soils Laboratory	1
Select 12 credit hours from the following courses:		12
AGRO 352	Soil Fertility and Fertilizers	
AGRO 452	Soil Microbiology	
AGRO 454	Soil Management and Conservation	
AGRO 457 & AGRO 458	Soil Formation, Classification and Mapping and Soil Formation, Classification and Mapping Laboratory	

AGRO 459	Techniques in Physical Soil Description	
Select two of the following courses:		6
AGRO 310	Pest Management	
AGRO 409 & AGRO 410	Weed Science and Weed Science Laboratory	
AGRO 420 & AGRO 421	Forage Crop Management and Forage Crops Laboratory	
AGRO 422	Field Crops	
AGRI 493	Sustainable Agriculture	
AGRI 369	Cooperative Education in Agriculture II	
AGRI 475	Selected Topics in Agriculture	
<b>Total Hours</b>		<b>48</b>

## Animal Science Concentration

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following:		3
AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition Required for Animal Science Concentration.	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Production Courses -select one of the following lecture/lab combinations</b>		<b>3</b>
ANSC 442 & ANSC 443	Beef Production and Beef Production Laboratory	
ANSC 330 & ANSC 331	Horse Production and Horse Production Laboratory	
ANSC 431 & ANSC 432	Dairy Production and Dairy Production Laboratory	
<b>Required Animal Science Electives</b>		
ANSC 240	Livestock Management	2
ANSC 241	Livestock Management Laboratory	1
ANSC 347	Animal Pathology	3
ANSC 458	Animal Growth and Meat Quality	3

<b>Select 1 of the following combinations</b>		<b>3</b>
ANSC 437 & ANSC 438	Physiology of Reproduction in Domestic Animals and Physiology of Reproduction in Domestic Animal Laboratory	
ANSC 446 & ANSC 447	Animal Breeding and Animal Breeding Laboratory	
ANSC 439	Equine Reproduction and Breeding	
<b>Select 6 credit hours from the following:</b>		<b>6</b>
ANSC 340	Meats and Meat Products	
ANSC 338	Introductory Livestock Evaluation and Selection	
ANSC 448	Animal Feeds and Feeding Practices	
ANSC 130	Introduction to Horse Science	
ANSC 131	Horse Science Lab	
ANSC 232	Basic Equitation	
ANSC 321	Comparative Anatomy	
ANSC 333	Horse Training	
ANSC 334	Horse Training Laboratory	
ANSC 336	Conformation and Performance Evaluation of Horses	
ANSC 342	Advanced Riding Maneuvers and Collection	
ANSC 350	Equine Career Opportunities	
ANSC 360	Equine Events Management	
AGRO 420	Forage Crop Management	
AGRO 421	Forage Crops Laboratory	
ANSC 440	Advanced Livestock Evaluation and Selection	
ANSC 475	Selected Topics in Agriculture	
Students must take Animal Science Laboratory		
ANSC 141	Introduction to Animal Science Laboratory (ANSC students must take ANSC 141)	1
<b>Total Hours</b>		<b>51</b>

## Dairy Science Concentration

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following:		3
AGRO 320	Crop Physiology	

ANSC 345	Principles of Animal Nutrition	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Dairy Science Courses</b>		
ANSC 141	Introduction to Animal Science Laboratory	1
ANSC 240	Livestock Management	2
ANSC 241	Livestock Management Laboratory	1
ANSC 431	Dairy Production	2
ANSC 432	Dairy Production Laboratory	1
ANSC 437	Physiology of Reproduction in Domestic Animals	2
ANSC 438	Physiology of Reproduction in Domestic Animal Laboratory	1
ANSC 448	Animal Feeds and Feeding Practices	4
AGRO 420	Forage Crop Management	3
AGRO 421	Forage Crops Laboratory	1
<b>Electives</b>		
Take 6 credit hours from the following choices		6
ANSC 347	Animal Pathology	
ANSC 446	Animal Breeding	
ANSC 447	Animal Breeding Laboratory	
ANSC 458	Animal Growth and Meat Quality	
ANSC 475	Selected Topics in Agriculture	
ANSC 338	Introductory Livestock Evaluation and Selection	
ANSC 440	Advanced Livestock Evaluation and Selection	
<b>Total Hours</b>		<b>53</b>

## General Agriculture Concentration

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following:		3
AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition	

AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Agriculture Courses</b>		
Select 7 hours of 300-400 level electives from any AGECE, AGED, AGMC, AGRI, AGRO, ANSC, or HORT courses		7
Select 12 hours of other AGECE, AGED, AGMC, AGRI, AGRO, ANSC, HORT electives; at least 6 hrs must be 300-400 level <sup>1</sup>		12
<b>Total Hours</b>		<b>48</b>

<sup>1</sup> Students may pursue a minor in lieu of the 12 hours of Agriculture electives.

## Horticulture Concentration

Code	Title	Hours
<b>Basic Agriculture Courses</b>		
AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	
Select one of the following:		3
AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3
<b>Horticulture Courses</b>		
HORT 301	Introduction to Landscape Plants	2
HORT 302	Introduction to Landscape Plants Laboratory	1
HORT 313	Turfgrass Management	3
HORT 316	Greenhouse Maintenance and Operation	2
HORT 317	Greenhouse Maintenance and Operation Laboratory	1
HORT 407	Plant Propagation	2
HORT 408	Plant Propagation Laboratory	1
AGRO 111	Plant Science Laboratory	1
AGRO 351	Soils Laboratory	1



**Electives**

Select 6 credit hours from the following courses: 6

HORT 340	Greenhouse Crop Production
HORT 304	Landscape Maintenance
HORT 305	Landscape Maintenance Laboratory
HORT 403	Landscape Design and Construction
HORT 404	Landscape Design and Construction Laboratory
HORT 312	Introduction to Horticulture
HORT 419	Fruit, Vegetable, and Vineyard Production
HORT 475	Selected Topics in Agriculture
HORT 209	Floral Design
AGRI 369	Cooperative Education in Agriculture II

**Total Hours 49****Horse Science Concentration**

Code	Title	Hours
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**Basic Agriculture Courses**

AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	

Select one of the following: 3

AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition Required for Horse Science concentration.	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3

**Horse Science Courses - Take the following courses**

ANSC 141	Introduction to Animal Science Laboratory	1
ANSC 330	Horse Production	2
ANSC 331	Horse Production Laboratory	1
ANSC 130	Introduction to Horse Science	2
ANSC 131	Horse Science Lab	1
ANSC 439	Equine Reproduction and Breeding	3

Select 10 credit hours from the following: 10

ANSC 232	Basic Equitation
ANSC 333	Horse Training

ANSC 334	Horse Training Laboratory
ANSC 336	Conformation and Performance Evaluation of Horses
ANSC 342	Advanced Riding Maneuvers and Collection
ANSC 350	Equine Career Opportunities
ANSC 360	Equine Events Management
ANSC 448	Animal Feeds and Feeding Practices
ANSC 475	Selected Topics in Agriculture
ANSC 240	Livestock Management
ANSC 241	Livestock Management Laboratory
ANSC 347	Animal Pathology
ANSC 440	Advanced Livestock Evaluation and Selection
ANSC 338	Introductory Livestock Evaluation and Selection
ANSC 437	Physiology of Reproduction in Domestic Animals
ANSC 438	Physiology of Reproduction in Domestic Animal Laboratory
AGRO 420	Forage Crop Management
AGRO 421	Forage Crops Laboratory

**Total Hours 49****Turf and Golf Course Management**

Code	Title	Hours
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**Basic Agriculture Courses**

AGRO 110	Introduction to Plant Science	3
ANSC 140	Introduction to Animal Science	3
AGEC 160	Introduction to Agribusiness and Agricultural Entrepreneurship	3
AGMC 170 & AGMC 171	Introduction to Agricultural Mechanization and Introduction to Agricultural Mechanization Laboratory	3
AGRI 175	University Experience - Agriculture	1
AGSY 176	Agriculture Safety	2
AGRI 291	Introduction to Data Analysis and Interpretation	3
or AGRI 491	Data Analysis and Interpretation	

Select one of the following: 3

AGRO 320	Crop Physiology	
ANSC 345	Principles of Animal Nutrition	
AGEC 360	Agricultural Economics	
AGMC 326	Precision Agriculture	
AGRO 350	Soils	3
AGRI 397	Agriculture Career Planning	1
AGRI 398	Seminar	1
AGRI 494	Contemporary Agricultural Issues	3

**Turf and Golf Course Management Courses**

HORT 313	Turfgrass Management	3
AGMC 272	Turf Equipment Management and Operation	2

AGMC 273	Turf Equipment Management and Operation Laboratory	1
AGMC 392	Turf Irrigation	2
AGMC 393	Turf Irrigation Laboratory	1
AGRI 369	Cooperative Education in Agriculture II	3
Select 9 hours from the following:		9
HORT 301	Introduction to Landscape Plants	
HORT 302	Introduction to Landscape Plants Laboratory	
HORT 304	Landscape Maintenance	
HORT 305	Landscape Maintenance Laboratory	
HORT 340	Greenhouse Crop Production	
HORT 407	Plant Propagation	
HORT 408	Plant Propagation Laboratory	
HORT 475	Selected Topics in Agriculture	
AGMC 270	Turf Mowing Equipment Maintenance	
AGMC 271	Turf Mowing Equipment Maintenance Laboratory	
AGMC 371	Agricultural Mechanics	
AGMC 372	Agricultural Mechanics Laboratory	
AGRO 310	Pest Management	
AGRO 351	Soils Laboratory	
AGRO 352	Soil Fertility and Fertilizers	
AGRO 409	Weed Science	
AGRO 410	Weed Science Laboratory	
AGRO 418	Plant Pathology	
<b>Total Hours</b>		<b>50</b>

## Finish in Four Plans

### Agribusiness

<b>First Year</b>			
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
AGEC 160		3 AGMC 170 & AGMC 171	3
AGSY 176		2 ANSC 140	3
AGRI 175		1 CHEM 107 & CHEM 108	4
CHEM 105 & CHEM 106		4 COMM 145	3
ENG 100		3 HIST 101 or HIST 102	3
MATH 115		3	
		<b>16</b>	<b>16</b>
<b>Second Year</b>			
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
AGEC 261		3 AGRI 291	3
AGRO 110		3 AGRO 350	3
BIOL 120 & BIOL 121		4 General Elective - Upper Division	1
Colonnade - Arts & Humanities		3 Colonnade - Social & Behavioral Sciences	3
ENG 200		3 Colonnade - Social & Cultural	3
		World Language Requirement or General Elective	3
		<b>16</b>	<b>16</b>

<b>Third Year</b>			
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
AGEC 360		3 AGEC 361	3
AGRI 397		1 AGEC 366	3
Agriculture Upper Division Elective		3 Agriculture Upper-Division Elective	3
Colonnade - Local to Global		3 Colonnade - Systems	3
ENG 300		3 General Elective	3
General Elective		3	
		<b>16</b>	<b>15</b>

<b>Fourth Year</b>			
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
AGEC 362		3 AGEC 463	3
AGRI 398		1 AGRI 494	3
General Elective - Upper Division		3 General Elective - Upper Division	3
General Elective - Upper Division		3 General Elective	3
General Elective		3	
		<b>13</b>	<b>12</b>

**Total Hours 120**

## Agriculture Systems

<b>First Year</b>			
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
ENG 100		3 COMM 145	3
MATH 115		3 AGEC 160	3
CHEM 105 & CHEM 106		4 ANSC 140	3
AGMC 170 & AGMC 171		3 CHEM 107 & CHEM 108	4
AGRI 175		1 HIST 101 or HIST 102	3
AGSY 176		2	
		<b>16</b>	<b>16</b>

<b>Second Year</b>			
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
ENG 200		3 AGRI 291	3
AGRO 110		3 AGMC 326	3
BIOL 120 & BIOL 121		4 Colonnade - Social & Behavioral Science	3
AGRO 350 & AGRO 351		4 Colonnade - Arts & Humanities	3
AG ELECTIVE		3 World Language Requirement, if needed, or General Elective	3
		<b>17</b>	<b>15</b>

<b>Third Year</b>			
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
MFGE 227		3 AGRI 398	1
AGMC 425		3 AGEC 366	3
ENG 300		3 AGMC 377 & AGMC 378	3
Colonnade - Social & Cultural		3 AGRI 397	1
Agriculture Elective		3 Agriculture Elective	3
		Agriculture Elective	3
		<b>15</b>	<b>14</b>

<b>Fourth Year</b>			
<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
AGRI 369		1-4 AGRI 494	3
Agriculture Elective		3 AGMC 373 & AGMC 374	3
Agriculture Elective		3 Agriculture Elective	3

Agriculture Elective	3	Colonnade - Systems	3
Colonnade - Local to Global	3		
	15		12

**Total Hours 120**

## Agricultural Education

First Year			
Fall	Hours	Spring	Hours
ENG 100		3 ENG 200	3
Colonnade - Arts & Humanities		3 AGED 250	3
ANSC 140		3 AGRO 110	3
AGRI 175		1 COMM 145	3
AGED 200		1 AGMC 170 & AGMC 171	3
Colonnade - Social & Behavioral	3		
AGSY 176	2		
	16		15

Second Year			
Fall	Hours	Spring	Hours
MATH 115 (or higher)		3 AGED 300	3
AGRI 398		1 AGED 489	1-3
EDU 260		3 AGECE 160	3
HORT 316 & HORT 317		3 CHEM 107 & CHEM 108	4
CHEM 105 & CHEM 106		4 AGRO 320, ANSC 345, AGECE 360, or AGMC 326	3
World Language Requirement, if needed, or General Elective	3		
	17		16

Third Year			
Fall	Hours	Spring	Hours
HIST 101 or HIST 102		3 Agriculture Elective	3
PSY 310		3 SPED 330	3
AGRI 291		3 AGRO 350	3
ENG 300		3 EDU 360	3
BIOL 120 & BIOL 121		4 AGED 471	3
EDU 350		3 Colonnade - Social & Cultural	3
	19		18

Fourth Year			
Fall	Hours	Spring	Hours
AGED 470		3 EDU 489	2-3
Colonnade - Systems		3 SEC 490	5-10
AGMC 371 & AGMC 372	3		
AGRI 397	1		
AGRI 494	3		
Colonnade - Local to Global	3		
LTCY 497	0		
	16		13

**Total Hours 130**

## Agronomy - Plant Science

First Year			
Fall	Hours	Spring	Hours
ENG 100		3 COMM 145	3
MATH 115		3 CHEM 107 & CHEM 108	4
CHEM 105 & CHEM 106		4 AGECE 160	3
AGRO 110 & AGRO 111		4 ANSC 140	3
AGRI 175		1 HIST 101 or HIST 102	3
AGSY 176	2		
	17		16

Second Year			
Fall	Hours	Spring	Hours
ENG 200		3 World Language Requirement or General Elective	3
AGMC 170 & AGMC 171		3 AGRO 310	3
BIOL 120 & BIOL 121		4 AGRI 291	3
Colonnade - Social & Behavioral Sciences		3 AGRO 320	3
AGRO 350 & AGRO 351		4 AGRI 397	1
		Colonnade - Arts & Humanities	3
	17		16

Third Year			
Fall	Hours	Spring	Hours
ENG 300		3 Agriculture upper-division Elective	3
AGRO 352		3 Agriculture upper-division Elective	3
AGRONOMY ELECTIVE		3 AGRONOMY ELECTIVE	3
AGRO 409 & AGRO 410		3 COLONNADE - SOCIAL &	3
AGRO 422	3		
	15		12

Fourth Year			
Fall	Hours	Spring	Hours
Colonnade - Local to Global		3 AGRI 494	3
AGRI 369		2 Agriculture upper-division Elective	3
AGRONOMY ELECTIVE		3 AGRONOMY ELECTIVE	3
AGRONOMY ELECTIVE		3 Colonnade - Systems	3
AGRONOMY ELECTIVE		3 AGRI 398	1
	14		13

**Total Hours 120**

## Agronomy - Soil Science

First Year			
Fall	Hours	Spring	Hours
ENG 100		3 COMM 145	3
CHEM 105 & CHEM 106		4 AGRI 108	3
AGRO 110		3 CHEM 107 & CHEM 108	4
AGRI 175		1 MATH 115	3
AGMC 170 & AGMC 171		3 AGSY 176	2
	14		15



**Second Year**

Fall	Hours	Spring	Hours
ENG 200		3 ANSC 140	3
BIOL 120 & BIOL 121		4 AGRI 291	3
Colonnade - Social & Behavioral Sciences		3 AGRO 320	3
Colonnade - Arts & Humanities		3 AGRI 397	1
AGRO 350 & AGRO 351		4 HIST 101 or HIST 102	3
		World Language Requirement or General Elective	3
		17	16

**Third Year**

Fall	Hours	Spring	Hours
ENG 300		3 AGRI 398	1
AGRO 352		3 AGRO 454	3
AGRO 459		3 Agronomy Plant Elective	3
AGEC 160		3 Colonnade - Local to Global	3
Agronomy Plant Elective		3 Agriculture upper- division Elective	3
		COLONNADE - SOCIAL A	3
		15	16

**Fourth Year**

Fall	Hours	Spring	Hours
AGRO 457 & AGRO 458		3 AGRI 494	3
Colonnade - Systems		3 AGRO 452	3
Agriculture Elective		3 Agriculture Elective	3
Agriculture Elective		3 Agriculture Elective	3
Agriculture Elective		3 AGRICULTURE ELECTIVE	2
		15	14

**Total Hours 122*****Animal Science*****First Year**

Fall	Hours	Spring	Hours
ENG 100		3 COMM 145	3
MATH 115		3 AGRI 108	3
CHEM 105 & CHEM 106		4 AGRO 110	3
ANSC 140 & ANSC 141		4 CHEM 107 & CHEM 108	4
AGRI 175		1 AGSY 176	2
		15	15

**Second Year**

Fall	Hours	Spring	Hours
ENG 200		3 World Language Requirement or General Elective	3
AGMC 170 & AGMC 171		3 AGRI or ANSC Elective	3
ANSC 240 & ANSC 241		3 AGRI 291	3
BIOL 120 & BIOL 121		4 Colonnade - Arts & Humanities	3
Colonnade - Social & Behavioral Sciences		3 ENG 300	3
		16	15

**Third Year**

Fall	Hours	Spring	Hours
HIST 101 or HIST 102		3 AGRI 398	1
AGRO 350		3 ANSC 446 & ANSC 447 (or ANSC 437/438 or ANSC 439)	3
ANSC 345		3 AGECE 160	3
AGRI or ANSC Elective		3 Colonnade - Social & Cultural	3
ANSC 347		3 Colonnade - Local to Global	3
		ANSC Elective	3
		15	16

**Fourth Year**

Fall	Hours	Spring	Hours
AGRI 397		1 AGRI 494	3
Colonnade - Systems		3 Animal Science Elective	3
ANSC ELECTIVE		3 ANSC ELECTIVE	3
ANSC ELECTIVE		3 ANSC 458	3
AGRI or ANSC Elective		3 Animal Science Elective	3
		13	15

**Total Hours 120*****General Agriculture*****First Year**

Fall	Hours	Spring	Hours
ENG 100		3 COMM 145	3
MATH 115		3 AGRI 108	3
ANSC 140		3 AGRO 110	3
CHEM 105 & CHEM 106		4 CHEM 107 & CHEM 108	4
AGRI 175		1 Colonnade - Arts & Humanities	3
AGSY 176		2	
		16	16

**Second Year**

Fall	Hours	Spring	Hours
ENG 200		3 World Language Requirement or General Elective	3
AGEC 160		3 AGRI 291	3
BIOL 120 & BIOL 121		4 HIST 101 or HIST 102	3
Colonnade - Social & Behavioral		3 ENG 300	3
		AGRO 320, ANSC 345, AGEC 360, or AGMC 326	3
		13	15

**Third Year**

Fall	Hours	Spring	Hours
Colonnade - Social & Cultural		3 AGRI 397	1
AGRO 350		3 ANSC Elective	3
AGMC 170 & AGMC 171		3 AGRO or HORT Elective	3
Animal Sciences Elective		3 AGECE Elective	3
Agriculture Elective		3 Agriculture Elective	3
		AGMC Elective	3
		15	16

**Fourth Year**

Fall	Hours	Spring	Hours
AGRI 398		1 AGRI 494	3
AGEC Elective		3 AGRO or HORT Elective	3
Agriculture Elective		3 Agriculture Elective	3
Agriculture Elective		3 Agriculture Elective	3
Agriculture Elective		1 Colonnade - Systems	3
Colonnade - Local to Global		3	
	<b>14</b>		<b>15</b>
<b>Total Hours 120</b>			

**Horticulture****First Year**

Fall	Hours	Spring	Hours
AGRO 110 & AGRO 111		4 COMM 145	3
MATH 115		3 ANSC 140	3
Colonnade - Arts & Humanities		3 AGMC 170 & AGMC 171	3
ENG 100		3 CHEM 105 & CHEM 106	4
AGRI 175		1 World Language Requirement or General Elective	3
AGSY 176		2	
	<b>16</b>		<b>16</b>

**Second Year**

Fall	Hours	Spring	Hours
CHEM 107 & CHEM 108		4 AGRO 320	3
BIOL 122 & BIOL 123		4 AGRO 350 & AGRO 351	4
HORT 301 & HORT 302		3 Horticulture Elective	3
HIST 101 or HIST 102		3 ENG 200	3
Colonnade - Social & Behavioral		3	
	<b>17</b>		<b>13</b>

**Third Year**

Fall	Hours	Spring	Hours
HORT 316 & HORT 317		3 AGECE 160	3
HORT 313		3 Colonnade - Social & Cultural	3
Horticulture Elective		3 Horticulture Elective	3
Agriculture Elective		3 AGRI 108	3
ENG 300		3 HORT ELECTIVE	2
	<b>15</b>		<b>14</b>

**Fourth Year**

Fall	Hours	Spring	Hours
AGRI 397		1 AGRI 398	1
AGRI 491 or AGRI 291		3 HORT 407 & HORT 408	3
AGRI 494		3 HORT ELECTIVE	3
Horticulture Elective		3 Horticulture Elective	3
Horticulture Elective		3 Colonnade - Systems	3
Colonnade - Local to Global		3	
	<b>16</b>		<b>13</b>
<b>Total Hours 120</b>			

**Horse Science****First Year**

Fall	Hours	Spring	Hours
ENG 100		3 COMM 145	3
MATH 115		3 AGRO 110	3
CHEM 105 & CHEM 106		4 ANSC 140	3
AGRI 175		1 ANSC 141	1
ANSC 130		2 CHEM 107 & CHEM 108	4
ANSC 131		1 AGSY 176	2
	<b>14</b>		<b>16</b>

**Second Year**

Fall	Hours	Spring	Hours
ENG 200		3 World Language Requirement or General Elective	3
AGMC 170 & AGMC 171		3 AGRI 291	3
BIOL 120 & BIOL 121		4 Colonnade - Arts & Humanities	3
ANSC ELECTIVE		3 ENG 300	3
Colonnade - Social & Behavioral		3 ANSC 331	1
		ANSC 330	2
	<b>16</b>		<b>15</b>

**Third Year**

Fall	Hours	Spring	Hours
HIST 101 or HIST 102		3 AGRI 398	1
AGRO 350		3 AGECE 160	3
ANSC 345		3 ANSC ELECTIVE	3
ANSC 232		2 Colonnade - Social & Cultural	3
AGRI 369		1 ANSC 439	3
ANSC ELECTIVE		3 Colonnade - Local to Global	3
	<b>15</b>		<b>16</b>

**Fourth Year**

Fall	Hours	Spring	Hours
AGRI 397		1 AGRI 494	3
Animal/Equine Science Elective		3 Animal/Equine Science Elective	3
Colonnade - Systems		3 ANSC ELECTIVE	3
AGRI 369		2 ANSC ELECTIVE	3
ANSC ELECTIVE		3 AGRI 369	1
		Animal/Equine Science Elective	3
	<b>12</b>		<b>16</b>

**Total Hours 120****Turf and Golf Course Management****First Year**

Fall	Hours	Spring	Hours
ENG 100		3 COMM 145	3
MATH 115		3 AGSY 176	2
CHEM 105 & CHEM 106		4 AGMC 170 & AGMC 171	3
AGRO 110		3 CHEM 107 & CHEM 108	4
AGRI 175		1 Colonnade: Arts & Humanities	3
	<b>14</b>		<b>15</b>

**Second Year**

<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
ENG 200		3 World Language (if needed) or General Elective	3
ANSC 140		3 AGRI 291	3
BIOL 120 & BIOL 121		4 AGRO 320	3
Colonnade - Social & Behavioral		3 HIST 101 or HIST 102	3
HORT 313		3 ENG 300	3
	<b>16</b>		<b>15</b>

**Third Year**

<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
Connections - Social and Cultural		3 AGRI 397	1
AGRO 350 & AGRO 351		4 AGMC 270 & AGMC 271	3
AGEC 160		3 AGMC 272 & AGMC 273	3
Connections - Local to Global		3 Elective Course (AGRI, HORT, AGECE, AGRO)	3
AGEC 260		3 HORT 301 & HORT 302	3
	<b>16</b>		<b>13</b>

**Fourth Year**

<b>Fall</b>	<b>Hours</b>	<b>Spring</b>	<b>Hours</b>
AGRI 398		1 AGRI 494	3
AGMC 392 & AGMC 393		3 Elective Course (AGRI, HORT, AGECE, AGRO)	3
Elective Course (AGRI, HORT, AGECE, AGRO)		3 Elective Course (AGRI, HORT, AGECE, AGRO)	3
Elective Course (AGRI, HORT, AGECE, AGRO)		3 Elective Course (AGRI, HORT, AGECE, AGRO)	3
AGRI 369		3 Elective Course (AGRI, HORT, AGECE, AGRO)	3
Connections - Systems		3	
	<b>16</b>		<b>15</b>

**Total Hours 120**