

College of Agriculture – Core Graduation Requirements

As of March 1, 2007

To earn a baccalaureate degree, a student shall complete resident study at Purdue University for at least two semesters and the enrollment in, and completion of, at least 32 semester credit hours of coursework required and approved for completion of the degree. These courses are expected to be at least junior-level courses. The College of Agriculture faculty

has established that a minimum of 130 semester credit hours must be completed to earn the degree of Bachelor of Science (B.S.), Bachelor of Science in Agricultural and Biological Engineering (B.S. A.B.E.), Bachelor of Science in Forestry (B.S.F.), or Bachelor of Science in Landscape Architecture (B.S.L.A.).

Minimum Core Graduation Requirements

Academic Category	B.S.	B.S.	B.S.F.	B.S.L.A.
		A.B.E.		
<i>Semester Credits</i>				
College of Agriculture Orientation				
Introduction to the College of Agriculture and Purdue University	1	1	1	1
Mathematics and Sciences				
Biological Sciences	8	8	8	8
General Chemistry	6	8	6	0
Calculus	3	16	3	0
Statistics (Calculus may be used in BSLA)	3	0	3	3
Earth and Atmospheric Sciences	0	0	0	3
Additional Mathematics and Sciences	8	9	8	6
Minimum Total	28	41	28	20
Written and Oral Communication				
ENGL 106 (First-Year Composition)	4	4	4	4
COM 114 (Fundamental of Speech Communication)	3	3	3	3
Additional Written or Oral Communication	3	3	3	3
Minimum Total	10	10	10	10
Social Sciences and Humanities				
Economics	3	3	3	3
Other Social Sciences	3-9	3-6	3-9	3-9
Humanities	6-12	6-9	6-12	9-15
Minimum Total	18	15	18	21
Departmental Requirements/Electives	73	63	81	80

International Understanding, Multicultural Awareness, and Capstone Course Requirements

Baccalaureate degree plans of study must include nine credits of international understanding electives, or equivalent, (six credits for Bachelor of Science in Agricultural and Biological Engineering), a three-credit multicultural awareness course, or

experience, and a capstone course, or experience. International understanding, multicultural awareness, and capstone course credits may also be used to fulfill core curricular requirements, or departmental requirements or electives.

Courses Not Applicable in Undergraduate Plans of Study

The following courses are not applicable as credit toward graduation in any College of Agriculture baccalaureate degree program: CHM 100; ENGL 100, 109; ENGR 191, 192, 193; MA 111, 123, 133, 134, 151, 152, 153, 154, 159; PHYS 149; STAT 113, 114; and all General Studies courses except GS 490A.

Mathematics and Sciences - (28) credits

The objectives of the mathematics and sciences component of the core curriculum are for students to acquire a foundation of knowledge in mathematics, chemistry, and the biological sciences and physical sciences, an understanding of the scientific method, and the ability to apply their knowledge and problem-solving skills to relevant issues.

Biological Sciences - (8) credits

(4) **BIOL 110** (Fundamentals of Biology I) **and** (4) **BIOL 111** (Fundamentals of Biology II)

(4) **BIOL 110** (Fundamentals of Biology I) **and** (4) **BIOL 203** (Human Anatomy and Physiology) **and** (4) **BIOL 204** (Human Anatomy and Physiology)

(4) **BIOL 111** (Fundamentals of Biology II) **and** (4) **BIOL 203** (Human Anatomy and Physiology) **and** (4) **BIOL 204** (Human Anatomy and Physiology)

(2) **BIOL 121** (Biology I: Diversity, Ecology, and Behavior) **and** (3) **BIOL 131** (Biology II: Diversity, Development, Structure and Function of Organisms) **and** (3) **BIOL 231** (Biology III: Cell Structure and Function)

(2) **BIOL 121** (Biology I: Diversity, Ecology, and Behavior) **and** (3) **BIOL 131** (Biology II: Diversity, Development, Structure and Function of Organisms) **and** (3) **BIOL 295E** (The Biology of the Living Cell)

(4) **BTNY 210** (Introduction to Plant Science) **and** (4) **BIOL 110** (Fundamentals of Biology I)

(4) **BTNY 210** (Introduction to Plant Science) **and** (4) **BIOL 111** (Fundamentals of Biology II)

(4) **BTNY 210** (Introduction to Plant Science) **and** (4) **BIOL 203** (Human Anatomy and Physiology) **and** (4) **BIOL 204** (Human Anatomy and Physiology)

(4) **BTNY 210** (Introduction to Plant Science) **and** (4) **HORT 301** (Plant Physiology)

To fulfill the biological sciences core requirement, all students must complete at least two hours of laboratory credit in biological sciences.

General Chemistry - (6) credits

(3) **CHM 111** (General Chemistry) **and** (3) **CHM 112** (General Chemistry)

(4) **CHM 115** (General Chemistry) **and** (4) **CHM 116** (General Chemistry)

Calculus - (3) credits

(5) **MA 161** (Plane Analytic Geometry and Calculus I)

(4) **MA 165** (Analytic Geometry and Calculus I)

(3) **MA 220** (Introduction to Calculus)

(3) **MA 223** (Introductory Analysis I)

Statistics - (3) credits

- (3) **STAT 301** (Elementary Statistical Methods)
- (3) **STAT 501** (Experimental Statistics I)
- (3) **STAT 503** (Statistical Methods for Biology)

Additional Mathematics or Sciences - (8) credits

- (3) **AGEC 352** (Quantitative Techniques for Firm Decision Making)
- (3) **AGEC 451** (Applied Econometrics)
- (3) **AGRY 255** (Soil Science)
- (3) **AGRY 270** (Forest Soils)
- (3) **AGRY 320** (Genetics)
- (1) **AGRY 321** (Genetics Laboratory)
- (3) **AGRY 335** (Weather and Climate)
- (3) **ANSC 221** (Principles of Animal Nutrition)
- (4) **ANSC 230** (Physiology of Domestic Animals)
- (3) **BCHM 307** (Biochemistry)
- (1) **BCHM 309** (Biochemistry Laboratory)
- (4) **BIOL 221** (Introduction to Microbiology)
- (3) **BIOL 231** (Biology III: Cell Structure and Function)
- (2) **BIOL 232** (Laboratory in Biology III: Cell Structure and Function)
- (3) **BIOL 241** (Biology IV: Genetics and Molecular Biology)
- (2) **BIOL 242** (Laboratory in Biology IV: Genetics and Molecular Biology)
- (2) **BIOL 286** (Introduction to Ecology)
- (2) **BIOL 287** (Organisms and Populations)
- (4) **BTNY 210** (Introduction to Plant Science)
- (3) **BTNY 211** (Plants and the Environment)
- (3) **BTNY 301** (Introductory Plant Pathology)
- (3) **BTNY 305** (Fundamentals of Plant Classification)
- (4) **BTNY 316** (Plant Anatomy)
- (4) **CHM 224** (Introductory Quantitative Analysis)
- (3) **CHM 255** (Organic Chemistry)
- (1) **CHM 255L** (Organic Chemistry Laboratory)
- (3) **CHM 256** (Organic Chemistry)
- (1) **CHM 256L** (Organic Chemistry Laboratory)
- (4) **CHM 257** (Organic Chemistry)
- (1) **CHM 257L** (Organic Chemistry Laboratory)
- (3) **CHM 261** (Organic Chemistry)
- (3) **CHM 262** (Organic Chemistry)
- (1) **CHM 263** (Organic Chemistry Laboratory)
- (1) **CHM 264** (Organic Chemistry Laboratory)
- (2) **C S 152** (FORTRAN Programming for Engineers)
- (2) **C S 156** (C Programming for Engineers)
- (4) **C S 180** (Programming I)
- (3) **EAS 111** (Physical Geology)
- (4) **EAS 112** (Historical Geology)
- (3) **EAS 221** (Survey of Atmospheric Science)
- (2) **ENTM 206** (General Entomology)
- (1) **ENTM 207** (General Entomology Laboratory)
- (3) **ENTM 210** (Introduction to Insect Behavior)
- (3) **ENTM 340** (Insect Pests of Trees, Turf, and Ornamentals)
- (4) **HORT 301** (Plant Physiology)
- (3) **HORT 350** (Biotechnology in Agriculture)
- (5) **MA 162** (Plane Analytic Geometry and Calculus II)
- (4) **MA 166** (Analytic Geometry and Calculus II)
- (3) **MA 224** (Introductory Analysis II)

- (4) **MA 261** (Multivariate Calculus)
- (3) **NRES 255** (Soil Science)
- (4) **PHYS 152** (Mechanics)
- (3) **PHYS 214** (The Nature of Physics)
- (4) **PHYS 220** (General Physics)
- (4) **PHYS 221** (General Physics)
- (3) **PHYS 241** (Electricity and Optics)
- (3) **STAT 502** (Experimental Statistics II)
- (3) **STAT 511** (Statistical Methods)

Written and Oral Communication - (10) credits

The written and oral communication component of the core curriculum will enhance students' abilities to communicate with clarity in formal, informal, and technical contexts, to develop and convey logical arguments when discussing problems or ideas, and to evaluate critically the arguments of others. Requirements may be fulfilled by completing one of the following options:

Option 1 (Beginning Freshmen – Regular Credentials)

- (3) **COM 114** (Fundamentals of Speech Communication)
- (4) **ENGL 106** (First-Year Composition)
- (3) From American Sign Language (ASL), Communication (COM 200+), English (ENGL 200+), (3) **AGR 201** (Communicating Across Culture), or (3) **YDAE 440** (Methods of Teaching Agricultural Education).

Option 2 (Beginning Freshmen – Advanced Credentials)

- (3) **COM 114** (Fundamentals of Speech Communication)
- (3) **ENGL 108** (Accelerated First-Year Composition) *
- (3) From American Sign Language (ASL), Communication (COM 200+), English (ENGL 200+), (3) **AGR 201** (Communicating Across Culture), or (3) **YDAE 440** (Methods of Teaching Agricultural Education).

Option 3 (Transfer Students – Three Credits of English Completed) †

- (3) **COM 114** (Fundamentals of Speech Communication)
- (3) Transfer credits in freshmen English composition, excluding courses equivalent or similar to ENGL 100.
- (6) From American Sign Language (ASL), Communication (COM 200+), English (ENGL 200+), (3) **AGR 201** (Communicating Across Culture), or (3) **YDAE 440** (Methods of Teaching Agricultural Education).

Option 4 (Transfer Students – Six Credits of English Completed) †

- (3) **COM 114** (Fundamentals of Speech Communication)
- (6) Transfer credits in freshmen English composition, excluding courses equivalent or similar to ENGL 100.
- (3) From American Sign Language (ASL), Communication (COM 200+), English (ENGL 200+), (3) **AGR 201** (Communicating Across Culture), or (3) **YDAE 440** (Methods of Teaching Agricultural Education).

Students enrolled in curricula leading to the Bachelor of Science in Agricultural and Biological Engineering degree may use three credits from courses offered by the Department of Foreign Languages and Literatures to fulfill additional Written and Oral Communication requirements if a minimum of six credits are earned in a language.

* *Students who earn an “A” or “B” in ENGL 108 are exempt one credit of Written and Oral Communication requirements and total graduation requirements. Those who do not earn an “A” or “B” in ENGL 108 must complete six credits from American Sign Language (ASL), Communication (COM 200+), English (ENGL 200+), (3) AGR 201 (Communicating Across Culture), or (3) YDAE 440 (Methods of Teaching Agricultural Education).*

† Ten credits are required to fulfill Written and Oral Communication requirements for the baccalaureate degree. The additional two credits may be used in the plan of study at the discretion of the department offering the major.

Social Sciences and Humanities - (18) credits

The objectives of the social sciences component of the core curriculum are for students to acquire a fundamental understanding of economics, sociology, psychology, and political science. These courses will provide students with the ability to examine systematically and quantitatively how economic, social, cultural, and political systems function and interact with one another and understand how individuals and groups contribute to the fabric of our diverse society.

The humanities component of the core curriculum is intended to encourage students to broaden their intellectual perspectives beyond their selected fields of study. It is hoped that by viewing their own lives in a broader context of human experience, and by examining their own preconceptions and beliefs and those of others, students will gain a greater appreciation for the depth and breadth of human culture and their place within it.

A plan of study must include a minimum of 12 credits earned outside of the College of Agriculture that can be applied in the "social sciences and humanities" core curriculum category. Plans of study must include at least three credits of "other social sciences" or "humanities" at the 300+ level.

Economics - (3) credits

- (3) **AGEC 217** (Economics)
- (3) **ECON 210** (Principles of Economics)
- (3) **ECON 251** (Microeconomics)
- (3) **ECON 252** (Macroeconomics)

Plans of study may include AGEC 217 or ECON 210, but not both.

Other Social Sciences - (3-9) credits

- Agricultural Economics 1/
- Agriculture 2/
- Anthropology
- Economics
- Forestry and Natural Resources 3/
- Political Science
- Psycho-Educational Studies 4/
- Psychological Sciences
- Sociology

Humanities - (6-12) credits

- Agriculture 5/
- Band 6/
- Educational Leadership and Cultural Foundations 7/
- English Literature 8/
- Foreign Languages and Literatures 9/
- History
- Interdisciplinary Studies
- Philosophy
- Visual and Performing Arts

1/ Course selection is limited to AGEC 250, 305, 340, 406, 410, 415, 450. No more than six credits can be taken from Agricultural Economics to fulfill other social sciences requirements.

2/ Course selection is limited to AGR 201.

3/ Course selection is limited to FNR 375.

4/ Course selection is limited to EDPS 235, 265.

5/ Course selection is limited to AGR 201.

6/ A maximum of three credits of band may be used to fulfill humanities requirements.

7/ Course selection is limited to EDST 200.

8/ Course selection is limited to ENGL 227, 230, 231, 232, 235, 237, 238, 239, 240, 241, 250, 257, 262, 264, 266, 267, 276, 279, 331, 333, 335, 337, 350, 351, 356, 360, 364, 372, 373, 375, 377, 379, 381, 382, 383, 386, 387, 396, 411, 412, 413, 414, 441, 442, 444, 462, 463, 468, 469, 492.

9/ A minimum of six credits of a foreign language must be earned to be included in a plan of study.

International Understanding

All undergraduate plans of study leading to the degree of Bachelor of Science, Bachelor of Science in Forestry, or Bachelor of Science in Landscape Architecture must include a minimum of nine credits from the international understanding electives list, or equivalent study abroad programs, international travel courses, or international work experiences. Six credits are required in programs of study leading to the Bachelor of Science in Agricultural and Biological Engineering degree.

International understanding elective credits may be used to fulfill written and oral communication, social sciences and humanities, or departmental requirements.

In today's rapidly changing international environment, students must broaden their understanding and appreciation of the historic, cultural, linguistic, and geographic diversity of the world's peoples, while enhancing their ability to interact effectively with people from other cultures. The objective of the international understanding component of the core curriculum is to stimulate students to explore the world and responsibly apply their learning and knowledge to global challenges.

Study Abroad Programs or International Travel Courses

In lieu of including nine or more credits of international understanding electives in a plan of study, students may partially or totally fulfill the international understanding requirements by earning credits in an approved study abroad program or international travel course.

Regardless of the academic discipline, all credits earned in an approved study abroad program or international travel course may be used toward the nine-credit international understanding requirement.

International Work Experience

Successful completion of an approved non-credit international work experience (AGR 495) may be used as follows:

- * An experience of 4-7 weeks may be used in lieu of three credits of international understanding electives to fulfill the international understanding requirement.
- * A minimum eight-week summer session experience may be used in lieu of six credits of international understanding electives to fulfill the international understanding requirement.
- * An academic semester experience may be used in lieu of nine credits of international understanding electives.

Total number of credits required for graduation are not reduced when students fulfill international understanding requirements through participation in approved non-credit international work experiences.

International Understanding Electives

International understanding electives include all courses offered by the Department of Foreign Languages and Literatures and those listed below. Proposed additions to this list may be submitted to the Agricultural Faculty Curriculum and Student Relations Committee for consideration. Contact your academic advisor.

- (1-4) All Foreign Languages and Literatures courses
- (3) **AGEC 250** (Economic Geography of World Food and Resources)
- (3) **AGEC 340** (International Economic Development)
- (3) **AGEC 450** (International Agricultural Trade)
- (1-3) **AGR 493** (Special Topics in International Agriculture)

- (0) **AGR 495** (International Professional Experience in Agriculture, Food, or Natural Resources)
- (3) **AGRY 285** (World Crop Adaptation and Distribution)
- (1-3) **AGRY 350** (Global Awareness)
- (3) **AGRY 399K** (Exploring International Agriculture)
- (3) **AGRY 570** (Agronomy in International Development)
- (3) **ANSC 294** (Exploring International Animal Agriculture)
- (3) **ANSC 295K** (Exploring International Agriculture)
- (3) **ANTH 100** (Introduction to Anthropology)
- (3) **ANTH 205** (Human Cultural Diversity)
- (3) **ANTH 578** (Peoples of Middle America)
- (3) **BTNY 201** (Plants and Civilization)
- (3) **COM 224** (Communicating in the Global Workplace)
- (3) **COM 424** (Communication in International Organizations)
- (3) **ECON 370** (International Trade)
- (3) **ECON 466** (International Economics)
- (3) **ENGL 266** (World Literature: From the Beginnings to 1700 A.D.)
- (3) **ENGL 267** (World Literature: From 1700 A.D. to the Present)
- (3) **FNR 230** (The World's Forests and Society)
- (3) **FNR 460** (International Natural Resources Summer Program)
- (3) **FNR 488** (Global Environmental Issues)
- (3) **HIST 240** (East Asia and Its Historic Transition)
- (3) **HIST 241** (East Asia in the Modern World)
- (3) **HIST 243** (South Asian History and Civilization)
- (3) **HIST 245** (Middle East History and Culture)
- (3) **HIST 271** (Latin American History to 1824)
- (3) **HIST 272** (Latin American History from 1824)
- (3) **HIST 302** (History of Horticulture)
- (3) **HIST 323** (German History)
- (3) **HIST 324** (Modern France)
- (3) **HIST 329** (History of Women in Modern Europe)
- (3) **HIST 340** (Modern China)
- (3) **HIST 341** (History of Africa South of the Sahara)
- (3) **HIST 342** (Africa and the West)
- (3) **HIST 343** (Traditional Japan)
- (3) **HIST 344** (History of Modern Japan)
- (3) **HIST 345** (Modern Middle East)
- (3) **HIST 441** (Africa in the Twentieth Century)
- (3) **HIST 450** (In The English Landscape: Integrating History, Horticulture and Landscape Architecture)
- (3) **HIST 472** (History of Mexico)
- (3) **HORT 306** (History of Horticulture)
- (3) **HORT 403** (Tropical Horticulture)
- (3) **HORT 450** (In The English Landscape: Integrating History, Horticulture and Landscape Architecture)
- (3) **LA 166** (History and Theory of Landscape Architecture)
- (3) **LA 450** (In The English Landscape: Integrating History, Horticulture and Landscape Architecture)
- (3) **PHIL 330** (Religions of the East)
- (3) **PHIL 331** (Religions of the West)
- (3) **POL 130** (Introduction to International Relations)
- (3) **POL 141** (Governments of the World)
- (3) **POL 232** (Contemporary Crises in International Relations)
- (3) **POL 235** (International Relations Among Rich and Poor Nations)
- (3) **POL 237** (Modern Weapons and International Relations)
- (3) **POL 290** (Russia: Yesterday, Today, and Tomorrow)
- (3) **POL 304** (Israel and World Politics)
- (3) **POL 344** (Introduction to the Politics of the Third World)
- (3) **POL 345** (West European Democracies in the Post-Industrial Era)
- (3) **POL 433** (International Organization)
- (3) **POL 434** (United States Foreign Policy, Central America and the Caribbean)

- (3) **POL 435** (International Law)
- (3) **POL 442** (Government and Politics in Russia)
- (3) **POL 447** (The British Political System and the Commonwealth of Nations)

Multicultural Awareness – (3) credits

All undergraduate plans of study leading to the degree of Bachelor of Science, Bachelor of Science in Agricultural and Biological Engineering, Bachelor of Science in Forestry, or Bachelor of Science in Landscape Architecture must include a minimum of three credits of multicultural awareness electives.

Students must broaden their awareness of the United States domestic, multicultural environment. The objective of the multicultural awareness component of the core curriculum is to stimulate students to become aware of self and others to be better prepared for the workplace and participatory citizenship.

This requirement may be fulfilled through:

- (3) **AGR 201** (Communicating Across Culture). The AGR 201 course coordinator and lead instructor will be the Assistant Dean and Director of the College of Agriculture Office of Diversity Programs. The course coordinator is responsible for validating the competency of faculty members responsible for laboratory sections. AGR 201 credits may be used to fulfill written and oral communication, social science and humanities, or departmental requirements.
- Selection from the multicultural electives course list. All courses must go through a validation process to be added to the list. Courses that include multicultural awareness components developed by College of Agriculture departments will follow this process.
- (0) **AGR 496** (Multicultural Professional Experience). Successful completion of an approved non-credit multicultural awareness work experience (AGR 496) of a minimum of 4 weeks duration may be used in lieu of three credits of multicultural awareness electives to fulfill the multicultural awareness requirement. The Assistant Dean for Diversity will be the instructor of record for AGR 496. Course proposals that address the learning objectives of the experience and define how the culture in which the immersion will take place is different from their native culture will be evaluated for approval by the Assistant Dean for Diversity. Approval is required as a condition for registration.

Multicultural Awareness Electives

Additional courses may be added to this list via approval by the Agricultural Faculty Curriculum and Student Relations Committee of the course syllabus, to determine that it meets the objective of the multicultural requirement in the College of Agriculture. “The objective of the multicultural awareness component of the core curriculum is to stimulate students to become aware of self and others to be better prepared for the workplace and participatory citizenship.” Students are encouraged to explore coursework outside their own culture.

- (3) **ANTH 303** (Gender Across Cultures)
- (3) **ANTH 379** (Indians of North America)
- (3) **COM 376** (Communication and Gender)
- (3) **COM 381** (Gender and Feminist Studies in Communication)
- (3) **EDCI 285** (Multiculturalism and Education)
- (3) **ENGL 257** (Literature of Black America)
- (3) **ENGL 358** (Black Drama)
- (3) **ENGL 360** (Gender and Literature)
- (3) **HIST 365** (Women in America)
- (3) **HIST 366** (Hispanic Heritage of the United States)
- (3) **HIST 377** (History and Culture of Native America)
- (3) **HIST 396** (Afro-American to 1865)
- (3) **HIST 398** (The Afro-American since 1865)
- (3) **HK 226** (Contemporary Women’s Health)
- (3) **IDIS 271** (Introduction to Afro-American Studies)
- (3) **IDIS 280** (Women’s Studies: An Introduction)
- (3) **IDIS 330** (Introduction to Jewish Studies)

- (3) **IDIS 370** (Black Women Rising)
- (3) **IDIS 375** (Black Family)
- (3) **IDIS 376** (African American Male)
- (3) **IDIS 481** (Women of Color in the United States)
- (3) **PHIL 225** (Philosophy of Women)
- (3) **PHIL 242** (Philosophy, Culture and the African American Experience)
- (3) **PHIL 330** (Religions of the East) *
- (3) **POL 222** (Women, Politics and Public Policy)
- (3) **POL 326** (Black Political Participation in America)
- (3) **POL 360** (Women and the Law)
- (3) **POL 456** (African American Political Thought)
- (3) **PSY 225** (Stereotyping and Prejudice)
- (3) **PSY 239** (The Psychology of Women)
- (3) **PSY 368** (Children's Development in Cross-Cultural Perspective)
- (3) **SOC 220** (Social Problems)
- (3) **SOC 310** (Racial and Ethnic Diversity)
- (3) **SOC 450** (Gender Roles in Modern Society)
- (3) **SPAN 235** (Mexican and Latino Culture) *
- (3) **YDAE 385** (Urban Service-Learning)

*These courses also appear on the suggested course list for College of Agriculture International Understanding electives.

Capstone Course or Experience - (0-3) credits

Baccalaureate degree plans of study must include a capstone course or experience. Capstone course credits also may be used to fulfill core curriculum requirements or departmental requirements or electives.

In a capstone experience, students will be challenged to integrate their accumulated knowledge and technical and social skills in order to identify and solve a problem relevant to issues encountered by professionals in their chosen discipline, and to communicate the results of their efforts to their peers. In doing so, students will have the opportunity to demonstrate their ability to adapt to professional situations. It is hoped that this experience will stimulate students' appreciation of the need for lifelong learning and initiate professional and personal liaisons.

The following capstone courses and experiences have been approved by the Agricultural Faculty.

- (4) **ABE 485** (Agricultural and Biological Engineering Design)
- (4) **ABE 556** (Biological and Food Process Design)
- (4) **AGEC 411** (Farm Management)
- (2) **AGEC 429** (Agribusiness Marketing Workshop)
- (3) **AGEC 430** (Agricultural and Food Business Strategy)
- (1-6) **AGEC 499H** (Honors Thesis)
- (1) **AGRY 498** (Agronomy Senior Seminar) **and** (3) **AGRY 585** (Soils and Land Use)
- (1) **AGRY 498** (Agronomy Senior Seminar) **and** (3) **AGRY 512** (Integrated Turfgrass Systems)
- (1) **AGRY 498** (Agronomy Senior Seminar) **and** (1-3) pre-approved faculty supervised research, an Engineering Projects in Community Service (EPICS) project, or an industry or government internship.
- (1) **ANSC 481** (Contemporary Issues in Animal Sciences) **and** one production/management course selected from ANSC 440, 441, 442, 443, 444, 445, or 446.
- (3) **ASM 495** (Agricultural Systems Management)
- (1) **BCHM 490** (Undergraduate Seminar) **and** 2-3 credits of **BCHM 498** (Undergraduate Thesis), **or** **BCHM 499H** (Honors Thesis), **or** (3) **BCHM 572** (Advanced Biochemical Techniques)
- (1) **BTNY 497** (Undergraduate Seminar) **and** (1-3) **BTNY 498** (Research in Plant Science), **or** with prior approval of the Botany and Plant Pathology faculty, a study abroad, course project, supervised internship, or other supervised work-related experience equivalent to BTNY 497 and 498.
- (1-2) **C E 496** (Senior Participation in Engineering Projects in Community Service)
- (8-10) **EDCI 498E** (Supervised Teaching of Agricultural Education)
- (1) **ENTM 491** (Capstone Experience in Entomology)
- (3) **FNR 408** (Ecosystem Management Practice)

- (3) **FS 443** (Food Processing III)
- (3) **HORT 425** (Landscape Horticulture Capstone Project)
- (1) **HORT 440** (Management Strategies in Public Horticulture)
- (1) **HORT 445** (Strategic Analysis of Horticultural Production and Marketing)
- (1) **HORT 492** (Horticultural Science Capstone Seminar)
- (3) **IT 483** (Facility Design for Lean Manufacturing)
- (5) **LA 426** (Capstone Course in Landscape Architecture)
- (3) **NRES 581** (Ecological Impact Analysis)
- (3) **YDAE 480** (Agricultural Communication Capstone Seminar)