Poultry Science (POSC)

Faculty
Nick Anthony, Professor
Walter G. Bottje, Professor
Keith Bramwell, Extension Associate Professor
Karen Christensen, Associate Professor
Fred D. Clark, Extension Professor
Craig N. Coon, Professor
Annie Donoghue, Research Professor
Dan Donoghue, Professor
Sami Dridi, Associate Professor
Gisela F. Erf, Professor, Avian Immunology Professorship
Casey Owens Hanning, Associate Professor
Billy M. Hargis, Professor, Sustainable Poultry Health Chair
Michael T. Kidd, Professor
Byung-Whi Kong, Associate Professor
Wayne J. Kuenzel, Professor
Young Min Kwon, Associate Professor
Yanbin Li, Distinguished Professor, Tyson Endowed Chair in Biosensing Engineering
John A. Marcy, Extension Professor
Dennis Joe Mason, Instructor
Narayan C. Rath, Adjunct Research Professor
Douglas Duane Rhoads, University Professor
Samuel J. Rochell, Assistant Professor
Colin Scanes, Adjunct Professor
Xiaolun Sun, Assistant Professor
Guillermo Tellez-Isaías, Visiting Professor
Susan E. Watkins, Extension Professor
Robert F. Wideman Jr., Professor
Tom Yazwinski, Adjunct University Professor
Michael T. Kidd
Head of the Department
0114 Poultry Science Center
479-575-3699
http://www.poultryscience.uark.edu/

The Department of Poultry Science offers a major in poultry science leading to a Bachelor of Science in Agriculture. The department also offers coursework for a minor and a certificate of excellence program.

A major in poultry science is designed to provide the scientific and technical education to prepare students for positions of leadership and responsibility in the expanding fields of production, processing, marketing, and distribution of meat, eggs, and related poultry products. The curriculum also prepares students for career opportunities in specialized areas of nutrition, breeding, genetics, physiology, management, food science, immunology, and disease. Elective hours allow students to select a minor and thus personalize their degree.

Elective hours can also be used to emphasize areas of business, production, processing or science. Pre-veterinary medicine, pre-medical, or pre-pharmacy requirements may be fulfilled while meeting degree requirements.

Curricula are designed to permit the student to obtain the necessary foundation to pursue graduate study for the master’s and doctoral degrees. Advanced degrees are offered but not limited to the areas of nutrition, genetics, physiology, product technology, and poultry health.

Requirements for a Major in Poultry Science (POSC)

State minimum core and discipline specific general education requirements:
(Course work that meets state minimum core requirements is in bold.)

UNIV 1001 University Perspectives (Sp, Su, Fa) 1

Communications (6-12 hours) 6-12
Two English Core Courses (unless exempt)
COMM 1313 Public Speaking (ACTS Equivalency = SPCH 1003) (Sp, Su, Fa)

Communication Intensive Elective (see Adviser)

U.S. History and Government (3 hours)
One U.S. History and Government Course 3

Mathematics and Statistics (6-7 hours)

One MATH Core Course 3-4
Select one of the following: 3

AGEC 2403 Quantitative Tools for Agribusiness (Fa)
STAT 2303 Principles of Statistics (ACTS Equivalency = MATH 2103) (Sp, Su, Fa)
AGST 4023 Principles of Experimentation (Fa)

Sciences (16-24 hours)

BIOL 1543 Principles of Biology (ACTS Equivalency = BIOL 1014 Lecture) (Sp, Su, Fa) 4
& BIOL 1541L Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab) (Sp, Su, Fa)

BIOL 2013 General Microbiology (ACTS Equivalency = BIOL 2004 Lecture) (Sp, Su, Fa) 4
& BIOL 2011L General Microbiology Laboratory (ACTS Equivalency = BIOL 2004 Lab) (Sp, Su, Fa)

Select one of the following: 4-8

CHEM 1073 Fundamentals of Chemistry (ACTS Equivalency = CHEM 1214 Lecture) (Su, Fa) & CHEM 1071L Fundamentals of Chemistry Laboratory (ACTS Equivalency = CHEM 1214 Lab) (Fa)

CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture) (Su, Fa) & CHEM 1101L University Chemistry Laboratory (ACTS Equivalency = CHEM 1414 Lab) (Su, Fa)
& CHEM 1123 University Chemistry I Laboratory (ACTS Equivalency = CHEM 1414 Lecture) (Sp, Su, Fa) & CHEM 1121LEquivalency = CHEM 1414 Lab) (Sp, Su, Fa)

Select one of the following: 4-8

CHEM 2613 Organic Physiological Chemistry (ACTS Equivalency = CHEM 1224 Lecture) (Sp, Su, Fa) & CHEM 2611LEquivalency = CHEM 1224 Lab) (Sp, Su, Fa)
& CHEM 3603 Organic Chemistry I (Su, Fa) & CHEM 3601Land Organic Chemistry I Laboratory (Su, Fa)
& CHEM 3613 & Organic Chemistry II (Sp, Su) & CHEM 3611Land Organic Chemistry II Laboratory (Sp, Su)

Fine Arts and Humanities (6 hours)
Poultry Science B.S.A.
Eight-Semester Degree Program

Students wishing to follow the degree plan should go to the Eight-
Semester Degree Policy (http://catalog.uark.edu/undergraduatecatalog/
academicregulations/eightsemesterdegreecompletionpolicy) for university
requirements of the program.

First Year

<table>
<thead>
<tr>
<th>Units</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1543 Principles of Biology (ACTS Equivalency = BIOL 1014 Lecture)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>AGEC 2303 Introduction to Agribusiness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BIOL/Humanities University Core Elective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 1203 College Algebra (ACTS Equivalency = MATH 1103)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Core Elective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 1012 Avian Biology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>FNAR/Humanities University Core Elective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year Total:</td>
<td>16</td>
<td>14</td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>Units</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 2343 Poultry Production (Fa)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Discipline-Related Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>History University Core Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AGEC 1103 Principles of Agricultural Microeconomics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>or ECON 2023 Principles of Microeconomics (ACTS Equivalency = ECON 2203)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1101L University Chemistry I Laboratory (ACTS Equivalency = CHEM 1414 Lab)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 1073 Fundamentals of Chemistry (ACTS Equivalency = CHEM 1214 Lecture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; CHEM 1071L Fundamentals of Chemistry Laboratory (ACTS Equivalency = CHEM 1214 Lab)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 2353 Poultry Breeder Management (Sp)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 3032 Animal Physiology I (Fa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 3042 Animal Physiology II (Sp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 4213 Integrated Poultry Management Systems (Fa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select 3 hours from the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 4801 Seminar: Research Topics (Odd years, Sp)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>POSC 4811 Seminar: Professionalism (Odd years, Fa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 4821 Seminar: Problem Solving (Even years, Sp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 4831 Seminar: Processing Regulations (Even years, Fa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select 6 hours from the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 3013 Exotic Companion Birds (Odd years, Fa)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>POSC 3381 Poultry Judging and Selection (Sp, Fa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 400V Special Problems (Sp, Su, Fa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 401V Internship in Poultry Science (Sp, Su, Fa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 4033 Statistical Process Control in the Food Industry (Irregular)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 4233 Value Added Muscle Foods (Odd years, Sp)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 4923 Brain and Behavior (Fa)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC Elective</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Discipline-Related Electives (12 hrs)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>General Electives (4-19 hours)</td>
<td>4-19</td>
<td></td>
</tr>
<tr>
<td>Total Hours:</td>
<td>120</td>
<td></td>
</tr>
</tbody>
</table>
**Third Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2013 General Microbiology (ACTS Equivalency = BIOL 2004 Lecture)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; BIOL 2011L General Microbiology Laboratory (ACTS Equivalency = BIOL 2004 Lab)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:
- CHEM 3603 Organic Chemistry I (Su, Fa)
- & CHEM 3601L Organic Chemistry I Laboratory (Su, Fa)
- General Elective

Select one of the following:
- POCS 4333 Poultry Breeding (Odd years, Fa)
- POSC/ANSC 3123 Principles of Genetics (Fa)
- General Elective (3 hours)

Select one of the following:
- PHYS 2013 College Physics I (ACTS Equivalency = PHYS 2014 Lecture) (Su, Fa)
- & PHYS 2011L College Physics I Laboratory (ACTS Equivalency = PHYS 2014 Lab) (Su, Fa)
- POSC 3032 Animal Physiology I (Fa)
- AGEC 2303 Introduction to Agribusiness (Sp, Su, Fa)

POCS 4811 Seminar: Professionalism (Odd years, Fa)
or POCS 4831 Seminar: Processing Regulations (Even years, Fa)

Select one of the following:
- CHEM 3613 Organic Chemistry II (Sp, Su)
- & CHEM 3611L Organic Chemistry II Laboratory (Sp, Su)
- General Elective

Select one of the following:
- PHYS 2033 College Physics II (ACTS Equivalency = PHYS 2024 Lecture) (Sp, Su)
- & PHYS 2031L College Physics II Laboratory (ACTS Equivalency = PHYS 2024 Lab) (Su)
- POSC 3042 Animal Physiology II (Sp)

AGEC 2303 Introduction to Agribusiness (Sp, Su, Fa)

POSC 4213 Integrated Poultry Management Systems (Fa)

Upper-Division POSC Elective 3

Discipline-Related Elective 3

Select one of the following:
- AGEC 2403 Quantitative Tools for Agribusiness (Fa)
- General Elective

POSC 4811 Seminar: Professionalism (Odd years, Fa)
or POSC 4831 Seminar: Processing Regulations (Even years, Fa)

POSC 4343 Poultry Nutrition (Sp)

Select one of the following:
- STAT 2303 Principles of Statistics (ACTS Equivalency = MATH 2103) (Sp, Su, Fa)
- AGST 4023 Principles of Experimentation (Fa)
- General Elective

Select one of the following:
- PHYS 2033 College Physics II (ACTS Equivalency = PHYS 2024 Lecture) (Sp, Su)
- & PHYS 2031L College Physics II Laboratory (ACTS Equivalency = PHYS 2024 Lab) (Su)
- POSC 3042 Animal Physiology II (Sp)
- AGEC 2303 Introduction to Agribusiness (Sp, Su, Fa)
- POSC 4213 Integrated Poultry Management Systems (Fa)
- General Elective

Year Total: 13 16

**Fourth Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 3223 Poultry Diseases (Fa)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POSC 4314 Egg and Meat Technology (Fa)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper-Division POSC Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Select one of the following:
- AGEC 2403 Quantitative Tools for Agribusiness (Fa)
- General Elective
- Discipline-Related Elective 3

POSC 4811 Seminar: Professionalism (Odd years, Fa)
or POSC 4831 Seminar: Processing Regulations (Even years, Fa)

POSC 4343 Poultry Nutrition (Sp)

Select one of the following:
- STAT 2303 Principles of Statistics (ACTS Equivalency = MATH 2103) (Sp, Su, Fa)
- AGST 4023 Principles of Experimentation (Fa)
- General Elective

Select one of the following:
- PHYS 2033 College Physics II (ACTS Equivalency = PHYS 2024 Lecture) (Sp, Su)
- & PHYS 2031L College Physics II Laboratory (ACTS Equivalency = PHYS 2024 Lab) (Su)
- POSC 3042 Animal Physiology II (Sp)
- AGEC 2303 Introduction to Agribusiness (Sp, Su, Fa)
- POSC 4213 Integrated Poultry Management Systems (Fa)
- General Elective
- Discipline-Related Elective 3

Year Total: 17 11

Total Units in Sequence: 120

1. If CHEM 1103/CHEM 1101L taken previous fall.
2. If CHEM 1103/CHEM 1101L and CHEM 1123/CHEM 1121L taken previously.
3. If CHEM 3603/CHEM 3601L taken previously.
Minor in Poultry Science (POSC-M)

A student planning to minor in poultry science should consult a departmental adviser. The minor consists of 15 hours to include the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 1002</td>
<td>Introduction to Careers in Poultry Science (Fa)</td>
<td>2</td>
</tr>
<tr>
<td>POSC 1012</td>
<td>Avian Biology (Sp)</td>
<td>2</td>
</tr>
<tr>
<td>POSC 2343</td>
<td>Poultry Production (Fa)</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2353</td>
<td>Poultry Breeder Management (Sp)</td>
<td>3</td>
</tr>
<tr>
<td>Select 5 hours from any POSC course listing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Requirements for Undergraduate Certificate of Excellence in Poultry Science

Students entering the Certificate of Excellence Program must 1) meet the admission requirements for the University of Arkansas and 2) have completed 90 hours of coursework with a 2.0 or higher from a regionally accredited institution of higher education.

Students who have completed a Bachelor of Science degree may also consider this program. Typical careers include production/processing/ allied positions in the poultry industry, graduate studies are also an option.

Curriculum Outline:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 3032</td>
<td>Animal Physiology I (Fa)</td>
<td>2</td>
</tr>
<tr>
<td>POSC 3042</td>
<td>Animal Physiology II (Sp)</td>
<td>2</td>
</tr>
<tr>
<td>POSC 3223</td>
<td>Poultry Diseases (Fa)</td>
<td>3</td>
</tr>
<tr>
<td>POSC 3554</td>
<td>Avian Anatomy (Sp)</td>
<td>4</td>
</tr>
<tr>
<td>POSC 4213</td>
<td>Integrated Poultry Management Systems (Fa)</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4314</td>
<td>Egg and Meat Technology (Fa)</td>
<td>4</td>
</tr>
<tr>
<td>POSC 4343</td>
<td>Poultry Nutrition (Sp)</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4801</td>
<td>Seminar: Research Topics (Odd years, Sp)</td>
<td>1</td>
</tr>
<tr>
<td>or POSC 4821</td>
<td>Seminar: Problem Solving (Even years, Sp)</td>
<td></td>
</tr>
<tr>
<td>POSC 4811</td>
<td>Seminar: Professionalism (Odd years, Fa)</td>
<td>1</td>
</tr>
<tr>
<td>or POSC 4831</td>
<td>Seminar: Processing Regulations (Even years, Fa)</td>
<td></td>
</tr>
<tr>
<td>POSC 401V</td>
<td>Internship in Poultry Science (Sp, Su, Fa)</td>
<td>3</td>
</tr>
<tr>
<td>POSC 410V</td>
<td>Special Topics in Poultry Science (Irregular)</td>
<td>3</td>
</tr>
</tbody>
</table>

Courses

POSC 1002. Introduction to Careers in Poultry Science (Fa). 2 Hours.

To introduce the student to the career opportunities in the poultry science industry. Corequisite: Lab component.

POSC 1012. Avian Biology (Sp). 2 Hours.

Students will be introduced to biological sciences associated with poultry. Topics will include avian origin, anatomy, physiology and behavior. Course will serve as foundation for poultry production courses. Lecture 2 hours.

POSC 1062. Sustainable Integrated Small Animal Farming (Sp). 2 Hours.

Practical information on small scale animal production, including practical strategies for farm planning, issues of economic and environmental sustainability, best management practices, biosecurity, disease prevention, and farm safety will be presented.

This course is cross-listed with ANSC 1062.

POSC 1123. The Animals in our Lives (Su). 3 Hours.

Address the controversies and focus on animal welfare, environmental issues and sustainability.

This course is cross-listed with ANSC 1123.

POSC 2343. Poultry Production (Fa). 3 Hours.

To develop a basic foundation about the practices utilized to produce broilers and turkeys. Course will highlight hatchery function and management; embryo development and hatching; chick/poultry transportation, preparation and maintenance of facilities for rearing birds, bird environment, nutrition, and health. Also to be covered are the different roles associated with live production in an integrated company. Corequisite: Lab component.

POSC 2353. Poultry Breeder Management (Sp). 3 Hours.

Students will be introduced to the management practices used in production of young and adult chickens, turkeys, and other poultry with special emphasis on broiler, breeder, and market egg production. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Pre- or Corequisite: POSC 1012.

POSC 3013. Exotic Companion Birds (Odd years, Fa). 3 Hours.

Topics include basic care, health, breeding, bird evolution, anatomy, and nutritional management of commonly kept exotic companion birds, including parrots, cockatoos, macaws, finches, canaries, and pigeons. Discussion will include housing and care for individual pet birds and large scale breeding and production. Lecture/ discussion 3 hours per week. Prerequisite: BIOL 1543.

POSC 3032. Animal Physiology I (Fa). 2 Hours.

Fundamental aspects of neural/muscle/bone tissues and the cardiovascular system. The normal structure and functions of these systems will be emphasized. Lecture 2 hours per week. Prerequisite: BIOL 1543 and CHEM 1123 or CHEM 1073.

This course is cross-listed with ANSC 3032.

POSC 3042. Animal Physiology II (Sp). 2 Hours.

Fundamental aspects of renal, respiratory, digestive, and endocrine physiology will be covered. The normal structure and function of these systems will be emphasized. Lecture 2 hours per week. Prerequisite: BIOL 1543 and CHEM 1123 or CHEM 1073.

This course is cross-listed with ANSC 3042.

POSC 3123. Principles of Genetics (Fa). 3 Hours.

Fundamentals of heredity, with special emphasis on the improvement of farm animals. Lecture 3 hours per week. Prerequisite: BIOL 1543 and MATH 1203 or higher.

This course is cross-listed with ANSC 3123.

POSC 3223. Poultry Diseases (Fa). 3 Hours.

Common diseases affecting poultry reared under commercial conditions will be covered including diagnosis, therapy and prevention. Immunity, sanitation practices, and chemophylaxis will also be covered. Lecture 3 hours per week with some demonstrations, slides and videotapes. Prerequisite: BIOL 2013 and BIOL 2011L and junior standing.

POSC 3381. Poultry Judging and Selection (Sp, Fa). 1 Hour.

Practice in production judging and flock selection. Laboratory 3 hours per week. May be repeated for up to 4 hours of degree credit.

POSC 3513. Current Approaches in Agricultural Laboratory Research (Even years, Sp). 3 Hours.

A laboratory course to introduce students to current laboratory research techniques used in agricultural and life sciences. Hands-on laboratory exercises will emphasize current cellular and molecular research techniques, laboratory notebook keeping, data interpretation, and presentation of results. Prerequisite: BIOL 1543.

This course is cross-listed with POSC 3513H.
POSC 3513H. Current Approaches in Agricultural Laboratory Research (Even years, Sp). 3 Hours.
A laboratory course to introduce students to current laboratory research techniques used in agricultural and life sciences. Hands-on laboratory exercises will emphasize current cellular and molecular research techniques, laboratory notebook keeping, data interpretation, and presentation of results. Prerequisite: BIOL 1543. This course is cross-listed with POSC 3513.

POSC 3554. Avian Anatomy (Sp). 4 Hours.
Detailed coverage of the external and internal anatomy of poultry, including formation and development of the egg and embryo. Lecture 3 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: BIOL 1543.

POSC 400V. Special Problems (Sp, Su, Fa). 1-9 Hour.
Special problems in the poultry sciences for advanced students. May be repeated for up to 9 hours of degree credit.

POSC 401V. Internship in Poultry Science (Sp, Su, Fa). 1-6 Hour.
Supervised work experience with private or government organizations to introduce students to professional areas of work in poultry science. Prerequisite: Junior standing. May be repeated for up to 8 hours of degree credit.

Analysis of processing data related to compliance with regulatory limits, quality & safety limits and internal & external customer specifications. Emphasizes statistical process control chart development, including understanding data and chart selection, calculating statistical limits, and interpreting process performance. Prerequisite: Instructor consent.

POSC 410V. Special Topics in Poultry Science (Irregular). 1-4 Hour.
Topics not covered in other courses or for a more intensive study of specific topics in poultry science. May be repeated for degree credit.

POSC 4123. Legal Issues in Animal Agriculture (Odd years, Sp). 3 Hours.
An issues-oriented course focusing on the legal issues involved in the production of poultry, swine and livestock. Emphasis will center on the laws, regulations and policy arguments involved in animal confinement, antibiotic use, humane slaughter and veterinary medicine, along with other related issues. The wide range of regulation from local to state to federal, depending on the issue will be studied and discussed. This course is cross-listed with AGEC 4123, ANSC 4123.

POSC 4213. Integrated Poultry Management Systems (Fa). 3 Hours.
Major managerial systems in the integrated commercial poultry industry. Development of an understanding of the basic decision making processes of poultry companies and the factors influencing those decisions. Prerequisite: POSC 2353 and AGEC 1103 and AGEC 2303.

POSC 4233. Value Added Muscle Foods (Odd years, Sp). 3 Hours.
An intense study of muscle structure and how it relates to the development of further processed meat products. Muscle ultrastructure, protein functionality, product development, and quality analysis will be covered. In class hands on activities will also be included to allow students to obtain experience of producing processed meat products. Prerequisite: POSC 4314.

POSC 4314. Egg and Meat Technology (Fa). 4 Hours.
Study of the science and practice of processing poultry meat and egg products; examination of the physical, chemical, functional and microbiological characteristics of value added poultry products; factors affecting consumer acceptance and marketing of poultry products and the efficiency of production. Corequisite: Lab component. Prerequisite: (CHEM 1123 and CHEM 1121L) or (CHEM 1073 and CHEM 1071L) and BIOL 1543 and BIOL 1541L.

POSC 4333. Poultry Breeding (Odd years, Fa). 3 Hours.
Application of new developments in poultry breeding for efficient egg and meat production. Not intended for students interested in a career in veterinary sciences. Lecture 3 hours per week. Prerequisite: MATH 1203 or higher and junior standing.