Animal Science (ANSC)

Faculty

Jason Apple, Professor
Paul Arthur Beck, Professor
Steve Breeding, Extension Associate Professor
A. Hayden Brown Jr., Professor
Michael A. Brown, Adjunct Professor
Joan M. Burke, Adjunct Professor
James D. Caldwell, Adjunct Assistant Professor
Jeffrey Chewning, Adjunct Professor
Wayne K. Cobleintz, Adjunct Professor
Ken Coffey, Professor
M. Shane Gadberry, Extension Associate Professor
Stacey A. Gunter, Adjunct Professor
Nancy Elizabeth Jack, Associate Professor
John A. Jennings, Extension Professor
Steven Jones, Extension Associate Professor
Beth Kegley, Professor
David L. Kreider, Associate Professor
Bryan Richard Kutz, Instructor
Michael L. Looper, Professor
Charles Maxwell, Professor
Russell A. Nugent III, Adjunct Professor
Kelley Pfalzgraf, Adjunct Professor
Fred W. Pohlman, Professor
Jeremy G. Powell, Associate Professor
Richard A. Roeder, Professor
Rick Rorie, Professor
Charles F. Rosenkrans Jr., Professor
Elizabeth Rebecca Rumley, Assistant Professor
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Degrees Conferred:

M.S., Ph.D. (ANSC)

Areas of Study: Graduate studies in subject matter areas of genetics, nutrition, parasitology, meats and physiology may be pursued. Beef cattle, dairy cattle, swine, sheep, and laboratory animals are available for research programs in the Animal Science Department.

Primary Areas of Faculty Research: Animal nutrition; animal physiology; animal breeding (genetics); meat science (muscle biology); parasitology.

Prerequisites to Degree Programs: The student pursuing a program for a Master of Science degree must meet all general requirements of the Graduate School. In addition, the student must have completed the B.S. degree, preferably in a college or university with a major or equivalent in one of the areas of the Animal Science Department. Applicants must submit three letters of recommendation. International students must submit scores on the Graduate Record Examinations.

For acceptance into a course of study leading to the Ph.D. degree, a grade-point average of 3.00 on all previous graduate work and three letters of recommendation are required. International students must submit scores on the Graduate Record Examinations. Students accepted into the Ph.D. program without a M.S. must have a 3.20 cumulative grade-point average on all undergraduate work. The student will have a minimum of 24 hours post-baccalaureate work and 18 hours of dissertation at the end of the program.

Requirements for the Master of Science Degree: (Minimum 30 hours.)

Thesis Option. The thesis option requires a minimum of 24 hours of graduate course work, plus six hours of thesis research credit. The student and adviser will prepare a program of work that may include additional undergraduate basic courses and at least 24 semester hours of studies plus the successful completion and defense of a thesis and submission of one research paper suitable for submission to a peer reviewed professional journal. The defense of the thesis will consist of an oral defense administered by the graduate advisor and the thesis committee. Any deficiencies in undergraduate major requirements or prerequisites for advanced courses may be included in the student’s program in addition to the 24 hours.

Non-thesis Option. The non-thesis option requires the completion of the plan of study outlined below, and successful performance on a final exam, but does not require the preparation of a thesis.

Requirements for application and admission to the non-thesis option:

• Applicants must meet the admission requirements of the University of Arkansas Graduate School. International students must submit scores on the GRE.

• An undergraduate B.S. degree in Animal Science or a closely related field of study, OR

• B.S. degree in another field with strong emphasis in the area of biological sciences (deficiency courses in addition to the prescribed 30 hour plan of study may be required).

• B.S. applicants without a strong background in biological sciences may be considered for admission to the program, but will be required to complete deficiency courses, as determined by the graduate admissions committee, in addition to the prescribed 30 hour plan of study.

Students must be accepted by a graduate advisor to begin the non-thesis program. The graduate advisor and the student’s graduate committee will administer the non-thesis program. Degree requirements will be completed when the student has satisfactorily completed course work that meets the requirement for the non-thesis degree as listed below, and has satisfactorily completed a final exam. Students must have a final GPA # 2.85 to graduate from the program.

Non-Thesis M.S. Program Requirement: 30 hours minimum

Core Courses: 18-19 hours
### Basic Program Core: 4 Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ANSC 5901</td>
<td>Seminar (Fa)</td>
<td>1</td>
</tr>
<tr>
<td>AGST 4023</td>
<td>Principles of Experimentation (Fa)</td>
<td>3</td>
</tr>
<tr>
<td>STAT 4003</td>
<td>Statistical Methods (Sp, Fa)</td>
<td>4</td>
</tr>
<tr>
<td>&amp; STAT 4001L</td>
<td>and Statistics Methods Laboratory (Sp, Fa)</td>
<td></td>
</tr>
<tr>
<td>ESRM 5393</td>
<td>Statistics in Education and Health Professions (Sp, Su, Fa)</td>
<td>3</td>
</tr>
<tr>
<td>ESRM 6403</td>
<td>Educational Statistics and Data Processing (Sp, Su, Fa)</td>
<td>3</td>
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OR, any graduate level statistics course approved by the advisory committee.

### Animal Science Core Courses: 8-9 Hours

#### Genetics: 3 hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ANSC 5123</td>
<td>Advanced Animal Genetics (Even years, Fa)</td>
</tr>
<tr>
<td>ANSC 5133</td>
<td>Quantitative Inheritance (Odd years, Sp)</td>
</tr>
</tbody>
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#### Nutrition: 3 hours

Any 5000 level or higher nutrition class in ANSC

#### Physiology: 2-3 Hours

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<th>Course Code</th>
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<tbody>
<tr>
<td>ANSC 5923</td>
<td>Brain &amp; Behavior (Fa)</td>
</tr>
<tr>
<td>ANSC 5932</td>
<td>Cardiovascular Physiology of Domestic Animals (Fa)</td>
</tr>
<tr>
<td>ANSC 5942</td>
<td>Endocrine Physiology of Domestic Animals (Fa)</td>
</tr>
<tr>
<td>ANSC 5952</td>
<td>Respiratory Physiology of Domestic Animals (Sp)</td>
</tr>
<tr>
<td>ANSC 5962</td>
<td>Gastrointestinal/Digestive Physiology of Domestic Animals (Fa)</td>
</tr>
<tr>
<td>ANSC 5972</td>
<td>Renal Physiology (Sp)</td>
</tr>
<tr>
<td>ANSC 6833</td>
<td>Reproduction in Domestic Animals (Even years, Sp)</td>
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</tbody>
</table>

### ANSC Electives: 9 Hours

Any graduate-level course in ANSC

### General Electives: 9 Hours

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>CHEM 3813</td>
<td>Introduction to Biochemistry (Su, Fa)</td>
<td>3</td>
</tr>
<tr>
<td>(Note: Graduate School approval is required.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRSD 5003</td>
<td>The Professoriate: Teaching, Learning and Assessment (Sp)</td>
<td>3</td>
</tr>
</tbody>
</table>

Any 5000 or 6000 level course in departments within AFLS or in BIOL, CHEM, ESRM, or STAT

Or any graduate-level course approved by the graduate advisory committee.

### Other program requirements

No more than two credit hours of seminar can be included in the 30 credit hour total.

At least 15 credits of ANSC courses must be at the 5000 level or above.

Non-thesis programs may include no more than three (3) hours of special problems in the minimum 30-credit hour requirement.

No more than six (6) hours of 4000-level graduate courses may be counted toward the 30-credit hour requirement.

Students are expected to meet with the graduate mentor at least once per semester.

Students are required to complete the annual graduate student progress report.

### Transition Between M.S. Programs: A student can transition from the non-thesis to a thesis program with the approval of the graduate advisor and the department head. A student desiring to transition from the non-thesis program must have the approval of the graduate advisor, the M.S. thesis committee, the department head, and the graduate dean. In addition, no credit will be granted for thesis hours, and a maximum of six hours of course work competed at the time of transition can be counted in the non-thesis degree program. Students in the non-thesis option are not eligible for departmental assistantships.

### Requirements for the Doctor of Philosophy Degree: In addition to the general requirements of the Graduate School, the requirements will consist of a program of research, appropriate course work and seminars as specified by the student’s graduate committee, as well as a dissertation and two research papers acceptable to the dissertation committee.