

Office of the Provost and Vice Chancellor  
for Academic Affairs

Swanlund Administration Building  
601 East John Street  
Champaign, IL 61820



October 29, 2009

Abbas Aminmansour, Chair  
Senate Committee on Educational Policy  
Office of the Senate  
228 English Building, MC-461

Dear Professor Aminmansour:

Enclosed is a copy of a proposal from the College of Agricultural, Consumer and Environmental Sciences to revise the BS in Animal Sciences. The six courses noted in the cover letter have been approved and forwarded to the Office of the Registrar

This proposal has been approved by the Courses and Curricula Committee of the College of Agricultural, Consumer and Environmental Sciences. It now requires Senate review.

Sincerely,

A handwritten signature in cursive script that reads "Kristi A. Kuntz".

Kristi A. Kuntz  
Assistant Provost

KAK/dkk

Enclosures

c: T. Carr  
W. Hurley  
C. Livingstone  
K. Martensen  
N. Merchen  
F. Simmons

UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN

College of Agricultural, Consumer  
and Environmental Sciences

Academic Programs  
104 Mumford Hall, MC-710  
1301 West Gregory Drive  
Urbana, IL 61801



RECEIVED  
OCT 26 2009  
OFFICE of the PROVOST

October 26, 2009

Kristi Kuntz, Assistant Provost  
Office of the Provost, Second Floor  
Swanlund Administration Building  
Campus MC-304

Dear Kristi:

Please find enclosed a proposal to the Senate Committee on Educational Policy. The ACES Courses and Curricula Committee has reviewed and approved a *Proposal to Revise the Bachelor of Science Curriculum for the Major in Animal Sciences*. Supporting documentation for this proposal appears on the attached paperwork, which has been prepared and formatted for review by the Senate.

Also enclosed are proposals from the College of ACES to create six new courses within the Department of Animal Sciences to support its revised curriculum:

- ANSC 101: *Contemporary Animal Issues*
- ANSC 221: *Cells, Metabolism and Genetics*
- ANSC 222: *Anatomy and Physiology*
- ANSC 223: *Animal Nutrition*
- ANSC 224: *Animal Reproduction and Growth*
- ANSC 498: *Integrating Animal Sciences*

All of these course proposals have been reviewed and endorsed by the ACES Courses and Curricula Committee.

Thank you for your consideration of these proposals. Please feel free to contact me should you have any questions.

Sincerely,

F. William Simmons  
Assistant Dean, College of ACES

FWS/rhc

cc: T. R. Carr  
W. L. Hurley  
N. R. Merchen  
ANSC C&C File



**Senate Educational Policy Committee  
Proposal Check Sheet**

**PROPOSAL TITLE** (Same as on proposal): Revision Of Bachelor Of Science Curriculum For The Major In Animal Sciences

**PROPOSAL TYPE** (Please select all that apply below):

**A.  Program and degree proposals**

1. This proposal is for a graduate program or degree

Yes  No

2. **Degree** proposal (e.g. B.S.A.E., M.S.C.E.)

New degree - - please name new degree name: \_\_\_\_\_

Revision of an existing degree - - please name of the existing degree to be revised:  
\_\_\_\_\_

3. **Major** proposal (disciplinary focus e.g. Mathematics, Mechanical Engineering)

New major - - please name new major: \_\_\_\_\_

Revision of an existing major - - please indicate the name of the existing major to be revised: Bachelor of Science for the Major in Animal Sciences

4. **Concentration** proposal (e.g. Financial Planning)

New concentration - - please name new concentration: \_\_\_\_\_

Revision of an existing concentration - - please name the existing concentration to be revised: \_\_\_\_\_

5. **Minor** proposal (e.g. Cinema Studies) New minor - - please name new concentration: \_\_\_\_\_ Revision of an existing minor - - please name the existing concentration to be revised:  
\_\_\_\_\_6.  Proposal for terminating an existing degree, major, concentration or minor

Please name and nature of the existing degree, major, concentration or minor: \_\_\_\_\_

7.  Proposal for a multi-institutional degree between Illinois (UIUC) and a foreign institution

Please name the existing Illinois degree or program: \_\_\_\_\_

Please name the partnering institution: \_\_\_\_\_

**B.**  **Proposal for renaming existing academic units** (college, school, department, or program)

Please provide the unit's current name: \_\_\_\_\_

Please provide the unit's proposed new name: \_\_\_\_\_

**C.**  **Proposal for re-organizing existing units** (colleges, schools, departments, or programs) Change in status of an existing and approved unit (e.g. change from a program to department). Please indicate current unit name including status: \_\_\_\_\_ Transfer an existing unit

Please provide the current unit's name and home: \_\_\_\_\_

Please provide the new home for the unit: \_\_\_\_\_

 Merge two or more existing units (e.g. merge department A with department B)

Name and college of unit one to be merged: \_\_\_\_\_

Name and college of unit two to be merged: \_\_\_\_\_

 Terminate an existing unit. Please provide the current unit's name and status: \_\_\_\_\_**D.**  **Other educational policy proposals** (e.g. academic calendar, grading policies, etc.)

Please indicate the nature of the proposal: \_\_\_\_\_

## PROPOSAL TO THE SENATE COMMITTEE ON EDUCATIONAL POLICY

### TITLE OF THE PROPOSAL:

**Revision of Bachelor of Science Curriculum for the Major in Animal Sciences**

### SPONSORS:

Professor Neal Merchen, Head, Department of Animal Sciences, 116 ASL, 3-3462,  
[nmerchen@illinois.edu](mailto:nmerchen@illinois.edu)

Professor Walter L. Hurley, Department of Animal Sciences, 430 ASL, 3-1327,  
[wlhurley@illinois.edu](mailto:wlhurley@illinois.edu)

### BRIEF DESCRIPTION:

The Department of Animal Sciences (ANSC) in the College of Agricultural, Consumer and Environmental Sciences (ACES) proposes to implement a revised undergraduate curriculum leading to a Bachelors of Science in Animal Sciences. This curriculum has three elements: 1) a *core curriculum* in which students will complete a set of ANSC courses during their freshman and sophomore years, thereby providing a solid foundation for students to enter into more specialized areas of study (Appendix A); 2) a *specialization curriculum* in which students will select from a set of ANSC courses during the junior and senior years, according to the student's interests and career goals; and 3) a *demonstration of learning* in which students will participate in experiential activities, culminating in the demonstration of their knowledge through a collaborative learning environment. Three concentrations are designed to address the breadth of interests of ANSC majors and provide substantial flexibility to pursue specialization areas of study (Appendices B & C). The concentrations are: a) Science, Pre-Veterinary and Medical, b) Companion Animal and Equine Science, and c) Technology and Management.

The proposed starting term for the revised ANSC major is Fall 2010. Students who are in their third or fourth years in Fall 2010 will be expected to complete the current requirements for their ANSC degree, with the exception that some of the new core curriculum courses may be substituted for current courses taken by all ANSC majors. Students enrolled in ANSC and who are sophomores in Fall 2010 may choose to transfer to the revised curriculum and begin the second year's set of core ANSC courses or complete the current ANSC major requirements. The latter students also may need to complete one or more courses normally taken in the first year of the revised curriculum. Plans for accommodating all current students in completing their ANSC curriculum are in place. Students entering the ANSC curriculum in Fall 2010 may choose to transfer to the revised curriculum and begin the first year's set of core ANSC courses or complete the current ANSC major requirements. Implementation of the revised curriculum will have limited, and typically no, impact on students' ability to complete their degree. The current ANSC curriculum will be phased out once all students have completed their degree.

### JUSTIFICATION:

The field of animal sciences encompasses a broad spectrum of disciplines in the biological sciences, including genetics, physiology, nutrition, and many others. It includes the application of the fundamental science to the management of animals, as well as the

development and application of technologies that impact animal growth, health, and well-being. It examines the role of animals in society as they are used for food, fiber, recreation, companionship, aesthetic, and non-agricultural environmental purposes. The breadth of this field provides a significant challenge for preparing students to have the knowledge and skills to pursue meaningful careers in this and related fields. The revised curriculum is designed to address this challenge.

#### **BUDGETARY AND STAFF IMPLICATIONS:**

**a. Additional Staff and Dollars Needed:** No new faculty positions will be needed to carry out the revised curriculum. The Department of ANSC expects to hire two academic professionals to provide curricular advising for students during the initial two years of the student's program. Graduate teaching assistants will be employed in the teaching of laboratory sections of one of the core courses. Expanding the capacity of the on-farm laboratories associated with some of the courses will require additional use of farms and farm resources. Some short-term costs will be associated with the development of the new core courses, as well as with the temporary maintenance of several existing courses to allow current students to complete their program. Each of these costs is expected to be off-set by a portion of the recently implemented tuition differential received by the Department of ANSC.

**b. Internal reallocations (e.g., change in class size, teaching loads, student-faculty ratio, etc.):** Expected class size of the new core courses is approximately the same as exists in several of the current ANSC-prescribed introductory courses. Teaching load of the ANSC faculty as a whole may be increased temporarily while the revised and current curricula are being offered concurrently. However, teaching load of the ANSC faculty as a whole is not expected to be significantly affected in the revised curriculum after the current curriculum is terminated. Teaching load of individual faculty members may be modified according to their role in teaching the core courses. No change is expected in the ratio of ANSC majors to faculty members, and the number of majors is not expected to increase substantially.

**c. Effect on course enrollment in other departments and explanations of discussions with representatives of those departments:** This curriculum revision is not expected to have an effect on enrollments in courses in other departments, with three possible exceptions. Currently, there are three required courses for ANSC majors that will no longer be required: ANSC 340 (Plant & Animal Genetics; cross-listed and co-taught by Crop Sciences); ACE 161 (Microcomputer Applications); and IB 104 (Animal Biology). These courses may still be taken as electives in the revised curriculum. Additionally, with the removal of the requirement for IB 104, some proportion of incoming ANSC majors may opt to take CHEM 102/103 during their first fall semester. Currently, ANSC majors do not start the CHEM series until their spring semester, freshman year. This may require the Department of Chemistry to increase the number of sections offered in the fall semester. The respective departments have been notified of the changes to the ANSC requirements.

**d. Impact on the University Library, computer use, laboratory use, equipment, etc.:** The revised ANSC curriculum is not expected to impact the University Library, computer use, or use of other classroom equipment, because the number of ANSC majors will not change substantially as a result of the revised curriculum. The demands for laboratory rooms will be similar to that which occurs for courses in the current curriculum; note that these currently available courses are scheduled to be terminated as the new courses are implemented.

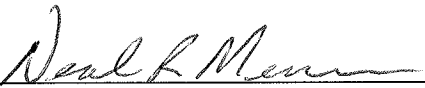
**DESIRED EFFECTIVE DATE:** Fall semester, 2010


**GUIDELINES FOR UNDERGRADUATE EDUCATION:**


The proposed modification of the undergraduate major adheres to the 1972 "Academic Plan for the Urbana-Champaign Campus," current General Education requirements, and other College of Agricultural, Consumer and Environmental Sciences academic policies for undergraduates.

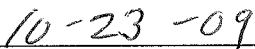
Revision to ANSC Major

**CLEARANCES:** (Clearances should include signatures [sponsor, department head, dean] and dates of approval)

  
\_\_\_\_\_  
Unit Representative:

  
\_\_\_\_\_  
Date:

  
\_\_\_\_\_  
College Representative:

  
\_\_\_\_\_  
Date:

\_\_\_\_\_  
Graduate College Representative:

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Provost Representative:

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Educational Policy Committee Representative:

\_\_\_\_\_  
Date:



## **STATEMENT FOR PROGRAMS OF STUDY CATALOG:**

### **For the Degree of Bachelor of Science with a Major in Animal Sciences**

Students pursuing this major may choose from three concentrations: Science, Pre-Veterinary and Medical; Companion Animal and Equine Science; and Technology and Management.

#### Science, Pre-Veterinary and Medical

The Science, Pre-Veterinary and Medical concentration is designed for students interested in graduate school or professional training after the undergraduate degree. It allows the student flexibility to choose courses that will satisfy most entrance requirements to post-graduate programs and emphasizes basic science courses. The concentration enables a student to complete all of the pre-veterinary science requirements while working towards a B.S. degree in animal sciences.

#### Companion Animal and Equine Science

The Companion Animal and Equine Science concentration is designed for students intending to pursue a career in those industries generally not associated with traditional meat animal or dairy production. Students will take courses that prepare them for careers in specialized fields of animal care, animal health, and animal well-being associated with zoos, kennels, the racing industry, and other fields.

#### Technology and Management

The Technology and Management concentration is designed for students intending to pursue a career in animal care and management or one of the associated food production industries. It emphasizes the scientific disciplines and the application of technology involved in animal production and animal products, as well as providing the opportunity to enhance a student's practical knowledge through business courses.

## **Appendix A:**

### **ANSC Revised Curriculum - Overview**

All Animal Sciences majors will be required to complete the following set of ANSC core courses. The intended sequence of Animal Sciences courses will be as follows.

#### Freshmen Year:

ANSC 100 Intro to Animal Sciences (4 credits)  
ANSC 101 Contemporary Animal Issues (3 credits)

#### Sophomore Year:

ANSC 103 Working with Farm Animals (2 credits)  
ANSC 221 Cells, Metabolism & Genetics (3 credits)  
ANSC 222 Anatomy & Physiology (3 credits)  
ANSC 223 Animal Nutrition (3 credits)  
ANSC 224 Animal Reproduction & Growth (4 credits)  
ANSC 298 Undergraduate Seminar (1 credit)

#### Sophomore, Junior or Senior Year:

ANSC 293, 294, 295, 299, or 396 (≥1 credits)

#### Junior or Senior Year:

Students will have chosen among three ANSC concentrations, including Science, Pre-Veterinary and Medical, Companion Animal and Equine Science, and Technology and Management (Appendix B). All ANSC majors also will be required to compete at least six additional ANSC courses. Additional courses are included on two course lists (Appendix C). List A courses are considered primarily as applied animal sciences, while List B courses are considered primarily as basic animal sciences. The proportion of courses required from the respective lists is determined by the student's concentration.

#### Senior Year:

ANSC 498 Integrating Animal Sciences (2 credits)

Appendix B:

**For the Degree of Bachelor of Science  
Animal Sciences Major  
Science, Pre-Veterinary and Medical Concentration**

The Science, Pre-Veterinary and Medical concentration is designed for students interested in graduate school or professional training after the undergraduate degree. It allows the student flexibility to choose courses that will satisfy most entrance requirements to post-graduate programs and emphasizes basic science courses. The concentration enables a student to complete all of the pre-veterinary science requirements while working towards a B.S. degree in animal sciences.

Effective: FA10

| Courses                                                                                                                        | Hours             | Courses                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Hours            |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>GENERAL EDUCATION REQUIRED</b>                                                                                              |                   | <b>ANIMAL SCIENCES REQUIRED</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |
| <i>Composition I and Speech</i><br>RHET 105<br>CMN 101                                                                         | 4<br>3            | ANSC 100<br>ANSC 101<br>ANSC 103<br>ANSC 221                                                                                                                                                                                                                                                                                                                                                                                                                               | 4<br>3<br>2<br>3 |
| <i>Advanced Composition</i> <sup>1</sup>                                                                                       | 3-4               | ANSC 222<br>ANSC 223<br>ANSC 224                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3<br>3<br>4      |
| <i>Cultural Studies</i> <sup>1</sup><br>One Western culture<br>One non-Western/U.S. minority culture                           | 3<br>3            | ANSC 293, 294, 295, 299, or 396<br>ANSC 298<br>ANSC 498                                                                                                                                                                                                                                                                                                                                                                                                                    | ≥1<br>1<br>2     |
| <i>Foreign Language</i> <sup>2</sup>                                                                                           |                   | <b>SCIENCE, PRE-VETERINARY AND MEDICAL CONCENTRATION REQUIRED</b>                                                                                                                                                                                                                                                                                                                                                                                                          |                  |
| <i>Quantitative Reasoning I</i><br>MATH 220, 221, or 234                                                                       | 4-5               | <i>Two courses selected from: [list A]</i><br>ANSC 119, ANSC 201, ANSC 204, ANSC 205, ANSC 206, ANSC 207, ANSC 209, ANSC 211, ANSC 213, ANSC 250, ANSC 310, ANSC 312, ANSC 313, ANSC 314, ANSC 400, ANSC 401, ANSC 402, ANSC 403, ANSC 404, ANSC 405, ANSC 409, ANSC 435, or ANSC 437                                                                                                                                                                                      |                  |
| <i>Quantitative Reasoning II</i><br>Statistics <sup>3</sup>                                                                    | 3-4               | <i>Four courses selected from: [list B]</i><br>ANSC 232, ANSC 306, ANSC 340, ANSC 350, ANSC 363, ANSC 406, ANSC 420, ANSC 421, ANSC 422, ANSC 431, ANSC 438, ANSC 440, ANSC 441, ANSC 444, ANSC 445, ANSC 446, ANSC 448, ANSC 449, ANSC 450, ANSC 451, ANSC 452, ANSC 453, ANSC 466, ANSC 467, ANSC 509, ANSC 510, ANSC 520, ANSC 521, ANSC 522, ANSC 523, ANSC 524, ANSC 525, ANSC 530, ANSC 531, ANSC 533, ANSC 541, ANSC 542, ANSC 543, ANSC 545, ANSC 554, or ANSC 561 |                  |
| <i>Natural Sciences and Technology</i><br>CHEM 102 and 103<br>CHEM 104 and 105 <sup>4</sup><br>MCB 100 and 101                 | 3,1<br>3,1<br>3,2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |
| <i>Humanities and the Arts</i> <sup>1</sup>                                                                                    | 6                 | ≥6                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |
| <i>Social and Behavioral Sciences</i><br>ACE 100 or ECON 102<br>One other Social and Behavioral Sciences course <sup>1,5</sup> | 3-4<br>3-4        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  |
| <b>ACES REQUIRED</b><br>ACES 101                                                                                               | 2                 | ≥12                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |
|                                                                                                                                |                   | <b>ACES Electives<br/>Open Electives</b> <sup>6</sup>                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |
|                                                                                                                                |                   | Pre-veterinary students must account for the course requirements of the respective College of Veterinary Medicine when choosing electives. <sup>6</sup>                                                                                                                                                                                                                                                                                                                    |                  |
|                                                                                                                                |                   | <b>Total Hours</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |
|                                                                                                                                |                   | 126                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |

1 Work with your academic advisor. For completing Gen Ed requirements, consult with your academic advisor and refer to the most current Gen Ed approved list available [www.courses.illinois.edu/gened](http://www.courses.illinois.edu/gened).

2 Course work at or above the third level is required for graduation.

3 Select from ACE 261; CPSC 241; ECON 202; MATH 161; PSYC 235; SOC 280; or STAT 100.

4 Biological version is recommended.

5 Cannot be an Economics course.

6 Students should consider taking advantage of approved internship and/or study abroad credit for fulfilling open elective hours or other curriculum requirements.

## Example Course Schedule: Science, Pre-Veterinary and Medical Concentration

### *Freshman Fall Semester*

|                           |              |
|---------------------------|--------------|
| ACES 101                  | 2            |
| ANSC 100                  | 4            |
| MATH 234 or 220           | 4-5          |
| CMN 111/101 or RHET 105   | 3-4          |
| CHEM 102                  | 3            |
| CHEM 103                  | 1            |
| <b>TOTAL FOR SEMESTER</b> | <b>17-19</b> |

### *Freshman Spring Semester*

|                                           |              |
|-------------------------------------------|--------------|
| ANSC 101                                  | 3            |
| ACE 100 or ECON 102                       | 3-4          |
| CMN 112/101 or RHET 105                   | 3-4          |
| CHEM 104                                  | 3            |
| CHEM 105                                  | 1            |
| Humanities or Social Science <sup>a</sup> | 3            |
| <b>TOTAL FOR SEMESTER</b>                 | <b>16-18</b> |

### *Sophomore Fall Semester*

|                                           |           |
|-------------------------------------------|-----------|
| ANSC 103 <sup>b</sup>                     | 2         |
| ANSC 221                                  | 3         |
| ANSC 222                                  | 3         |
| ANSC 298 <sup>b</sup>                     | 1         |
| Humanities or Social Science <sup>a</sup> | 3         |
| STAT 100                                  | 3         |
| <b>TOTAL FOR SEMESTER</b>                 | <b>15</b> |

### *Sophomore Spring Semester*

|                                           |           |
|-------------------------------------------|-----------|
| ANSC 223                                  | 3         |
| ANSC 224                                  | 4         |
| CHEM 232 <sup>c,d,e</sup>                 | 3         |
| CHEM 233 <sup>c,d,e</sup>                 | 2         |
| Humanities or Social Science <sup>a</sup> | 3         |
| <b>TOTAL FOR SEMESTER</b>                 | <b>15</b> |

### *Junior Fall Semester*

|                           |           |
|---------------------------|-----------|
| ANSC [List A]             | 3         |
| MCB 100                   | 3         |
| MCB 101                   | 2         |
| PHYS 101 <sup>c,d</sup>   | 5         |
| Electives <sup>d,e</sup>  | 3         |
| <b>TOTAL FOR SEMESTER</b> | <b>16</b> |

### *Junior Spring Semester*

|                           |           |
|---------------------------|-----------|
| ANSC [List B]             | 3         |
| ANSC [List B]             | 3         |
| ANSC 295                  | 4         |
| Advanced COMP             | 3         |
| Electives <sup>d,e</sup>  | 3         |
| <b>TOTAL FOR SEMESTER</b> | <b>16</b> |

### *Senior Fall Semester*

|                                 |           |
|---------------------------------|-----------|
| ANSC [List A]                   | 3         |
| ANSC [List A]                   | 3         |
| Cultural Studies                | 3         |
| ANSC 350/MCB 450 <sup>c,d</sup> | 3         |
| Electives <sup>d,e</sup>        | 5         |
| <b>TOTAL FOR SEMESTER</b>       | <b>17</b> |

### *Senior Spring Semester*

|                           |           |
|---------------------------|-----------|
| ANSC [List B]             | 3         |
| ANSC 498 <sup>f</sup>     | 2         |
| Cultural Studies          | 3         |
| Electives <sup>d,e</sup>  | 5         |
| <b>TOTAL FOR SEMESTER</b> | <b>13</b> |

**TOTAL CREDITS MINIMUM = 126**

<sup>a</sup>Students may choose Humanities and/or Social Science courses that also satisfy the Cultural Studies requirements, thereby opening up the opportunity to choose other courses to satisfy the additional elective hours.

<sup>b</sup>ANSC 103 and ANSC 298 must be completed by the end of the Sophomore year. Each course may be taken in either the Fall or Spring semesters.

<sup>c</sup>Not required; counts toward elective credits. Students pursuing a minor in Chemistry or admission to a Veterinary Medicine Program should consider using their elective credits hours to meet expected course work of that program.

<sup>d</sup>Students pursuing admission to a Veterinary Medicine Program should consider using their elective credit hours to meet expected course work of that program, including: CHEM 232 and 233, PHYS 101 and 102, ANSC 350 or MCB 450. Note: some Colleges of Veterinary Medicine also require a second semester of organic chemistry.

<sup>e</sup>Students pursuing a minor in Chemistry should consider using their elective credit hours to meet expected course work of that minor, which requires 20 hours of chemistry course work. Additional courses that may be used to complete the Chemistry minor beyond CHEM 102/103 and 104/105 may include CHEM 232 and 233, MCB 450, CHEM 332, and CHEM 494. CHEM 101 may not be used as part of the 20 hours.

<sup>f</sup>ANSC 498 should be taken in either the first or second semester of the Senior year.

**For the Degree of Bachelor of Science  
Animal Sciences Major  
Companion Animal and Equine Sciences Concentration**

The Companion Animal and Equine Science concentration is designed for students intending to pursue a career in those industries generally not associated with traditional meat animal or dairy production. Students will take courses that prepare them for careers in specialized fields of animal care, animal health, and animal well-being associated with zoos, kennels, research laboratories, and the racing industry. **Effective: FA10**

| <b>Courses</b>                                                                                                                 | <b>Hours</b>      | <b>Courses</b>                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Hours</b>     |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>GENERAL EDUCATION REQUIRED</b>                                                                                              |                   | <b>ANIMAL SCIENCES REQUIRED</b>                                                                                                                                                                                                                                                                                                                                                                                                             |                  |
| <i>Composition I and Speech</i><br>RHET 105<br>CMN 101                                                                         | 4<br>3            | ANSC 100<br>ANSC 101<br>ANSC 103<br>ANSC 221                                                                                                                                                                                                                                                                                                                                                                                                | 4<br>3<br>2<br>3 |
| <i>Advanced Composition</i> <sup>1</sup>                                                                                       | 3-4               | ANSC 222<br>ANSC 223<br>ANSC 224                                                                                                                                                                                                                                                                                                                                                                                                            | 3<br>3<br>4      |
| <i>Cultural Studies</i> <sup>1</sup><br>One Western culture<br>One non-Western/U.S. minority culture                           | 3<br>3            | ANSC 293, 294, 295, 299, or 396<br>ANSC 298<br>ANSC 498                                                                                                                                                                                                                                                                                                                                                                                     | ≥1<br>1<br>2     |
| <i>Foreign Language</i> <sup>2</sup>                                                                                           |                   | <b>COMPANION ANIMAL &amp; EQUINE SCIENCES CONCENTRATION REQUIRED</b>                                                                                                                                                                                                                                                                                                                                                                        |                  |
| <i>Quantitative Reasoning I</i><br>MATH 220, 221, or 234                                                                       | 4-5               | <i>Three courses selected from:</i><br>ANSC 206, ANSC 207, ANSC 250, ANSC 306, ANSC 422, or ANSC 467                                                                                                                                                                                                                                                                                                                                        | ≥9               |
| <i>Quantitative Reasoning II</i><br>Statistics <sup>3</sup>                                                                    | 3-4               | <i>One course selected from: [list A]</i><br>ANSC 119, ANSC 201, ANSC 204, ANSC 205, ANSC 209, ANSC 211, ANSC 213, ANSC 310, ANSC 312, ANSC 313, ANSC 314, ANSC 400, ANSC 401, ANSC 402, ANSC 403, ANSC 404, ANSC 405, ANSC 409, ANSC 435, or ANSC 437                                                                                                                                                                                      | ≥3               |
| <i>Natural Sciences and Technology</i><br>CHEM 102 and 103<br>CHEM 104 and 105 <sup>4</sup><br>MCB 100 and 101                 | 3,1<br>3,1<br>3,2 | <i>Two courses selected from: [list B]</i><br>ANSC 232, ANSC 340, ANSC 350, ANSC 363, ANSC 406, ANSC 420, ANSC 421, ANSC 431, ANSC 438, ANSC 440, ANSC 441, ANSC 444, ANSC 445, ANSC 446, ANSC 448, ANSC 449, ANSC 450, ANSC 451, ANSC 452, ANSC 453, ANSC 466, ANSC 509, ANSC 510, ANSC 520, ANSC 521, ANSC 522, ANSC 523, ANSC 524, ANSC 525, ANSC 530, ANSC 531, ANSC 533, ANSC 541, ANSC 542, ANSC 543, ANSC 545, ANSC 554, or ANSC 561 | ≥6               |
| <i>Humanities and the Arts</i> <sup>1</sup>                                                                                    | 6                 |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |
| <i>Social and Behavioral Sciences</i><br>ACE 100 or ECON 102<br>One other Social and Behavioral Sciences course <sup>1,5</sup> | 3-4<br>3-4        |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |
| <b>ACES REQUIRED</b><br>ACES 101                                                                                               | 2                 |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                  |
|                                                                                                                                |                   | <b>ACES Electives</b><br><b>Open Electives</b> <sup>6</sup><br><br>Pre-veterinary students must account for the course requirements of the respective College of Veterinary Medicine when choosing electives. <sup>6</sup><br><b>Total Hours</b>                                                                                                                                                                                            | 126              |

<sup>1</sup> For completing Gen Ed requirements, consult with your academic advisor and refer to the most current Gen Ed approved list available [www.courses.illinois.edu/gened](http://www.courses.illinois.edu/gened).

<sup>2</sup> Course work at or above the third level is required for graduation.

<sup>3</sup> Select from ACE 261; CPSC 241; ECON 202; MATH 161; PSYC 235; SOC 280; or STAT 100.

<sup>4</sup> Biological version is recommended.

<sup>5</sup> Cannot be an Economics course.

<sup>6</sup> Students should consider taking advantage of approved internship and/or study abroad credit for fulfilling open elective hours or other curriculum requirements.

## Example Course Schedule: Companion Animal and Equine Sciences Concentration

### *Freshman Fall Semester*

|                           |              |
|---------------------------|--------------|
| ACES 101                  | 2            |
| ANSC 100                  | 4            |
| MATH 234 or 220           | 4-5          |
| CMN 111/101 or RHET 105   | 3-4          |
| CHEM 102                  | 3            |
| CHEM 103                  | 1            |
| <b>TOTAL FOR SEMESTER</b> | <b>17-19</b> |

### *Freshman Spring Semester*

|                                           |              |
|-------------------------------------------|--------------|
| ANSC 101                                  | 3            |
| ACE 100 or ECON 102                       | 3-4          |
| CMN 112/101 or RHET 105                   | 3-4          |
| CHEM 104                                  | 3            |
| CHEM 105                                  | 1            |
| Humanities or Social Science <sup>a</sup> | 3            |
| <b>TOTAL FOR SEMESTER</b>                 | <b>16-18</b> |

### *Sophomore Fall Semester*

|                                           |           |
|-------------------------------------------|-----------|
| ANSC 221                                  | 3         |
| ANSC 222                                  | 3         |
| ANSC 298 <sup>b</sup>                     | 1         |
| Humanities or Social Science <sup>a</sup> | 3         |
| STAT 100                                  | 3         |
| <b>TOTAL FOR SEMESTER</b>                 | <b>13</b> |

### *Sophomore Spring Semester*

|                           |           |
|---------------------------|-----------|
| ANSC 103 <sup>b</sup>     | 2         |
| ANSC 223                  | 3         |
| ANSC 224                  | 4         |
| CHEM 232 <sup>c,d,e</sup> | 3         |
| CHEM 233 <sup>c,d,e</sup> | 2         |
| <b>TOTAL FOR SEMESTER</b> | <b>14</b> |

### *Junior Fall Semester*

|                                           |           |
|-------------------------------------------|-----------|
| ANSC 250                                  | 3         |
| ANSC [List A]                             | 3         |
| Humanities or Social Science <sup>a</sup> | 3         |
| MCB 100                                   | 3         |
| MCB 101                                   | 2         |
| Electives <sup>d,e</sup>                  | 3         |
| <b>TOTAL FOR SEMESTER</b>                 | <b>17</b> |

### *Junior Spring Semester*

|                           |           |
|---------------------------|-----------|
| ANSC 295                  | 3         |
| ANSC 422                  | 3         |
| ANSC [List B]             | 3         |
| Advanced COMP             | 3         |
| Electives <sup>d,e</sup>  | 3         |
| <b>TOTAL FOR SEMESTER</b> | <b>15</b> |

### *Senior Fall Semester*

|                           |           |
|---------------------------|-----------|
| ANSC 206                  | 3         |
| ANSC 498 <sup>f</sup>     | 2         |
| Cultural Studies          | 3         |
| Electives <sup>d,e</sup>  | 8         |
| <b>TOTAL FOR SEMESTER</b> | <b>16</b> |

### *Senior Spring Semester*

|                           |           |
|---------------------------|-----------|
| ANSC [List B]             | 3         |
| Cultural Studies          | 3         |
| Electives <sup>d,e</sup>  | 9         |
| <b>TOTAL FOR SEMESTER</b> | <b>15</b> |

**TOTAL CREDITS MINIMUM = 126**

<sup>a</sup>Students may choose Humanities and/or Social Science courses that also satisfy the Cultural Studies requirements, thereby opening up the opportunity to choose other courses to satisfy the additional elective hours.

<sup>b</sup>ANSC 103 and ANSC 298 must be completed by the end of the Sophomore year. Each course may be taken in either the Fall or Spring semesters.

<sup>c</sup>Not required; counts toward elective credits. Students pursuing a minor in Chemistry or admission to a Veterinary Medicine Program should consider using their elective credits hours to meet expected course work of that program.

<sup>d</sup>Students pursuing admission to a Veterinary Medicine Program should consider using their elective credits hours to meet expected course work of that program, including: CHEM 232 and 233, PHYS 101 and 102, ANSC 350 or MCB 450. Note: some Colleges of Veterinary Medicine also require a second semester of organic chemistry.

<sup>e</sup>Students pursuing a minor in Chemistry should consider using their elective credit hours to meet expected course work of that minor which requires 20 hours of chemistry course work. Additional courses that may be used to complete the Chemistry minor beyond CHEM 102/103 and 104/105 may include CHEM 232 and 233, MCB 450, CHEM 332, and CHEM 494. CHEM 101 may not be used as part of the 20 hours.

<sup>f</sup>ANSC 498 should be taken in either the first or second semester of the Senior year.

**For the Degree of Bachelor of Science  
Animal Sciences Major  
Technology and Management Concentration**

The Technology and Management concentration is designed for students intending to pursue a career in animal care and management or one of the associated food production industries. It emphasizes the scientific disciplines and the application of technology involved in animal production and animal products, as well as providing the opportunity to enhance a student's practical knowledge through business courses. **Effective: FA10**

| <b>Courses</b>                                                                                                                 | <b>Hours</b>      | <b>Courses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Hours</b>     |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>GENERAL EDUCATION REQUIRED</b>                                                                                              |                   | <b>ANIMAL SCIENCES REQUIRED</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |
| <i>Composition I and Speech</i><br>RHET 105<br>CMN 101                                                                         | 4<br>3            | ANSC 100<br>ANSC 101<br>ANSC 103<br>ANSC 221                                                                                                                                                                                                                                                                                                                                                                                                                              | 4<br>3<br>2<br>3 |
| <i>Advanced Composition<sup>1</sup></i>                                                                                        | 3-4               | ANSC 222<br>ANSC 223<br>ANSC 224                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3<br>3<br>4      |
| <i>Cultural Studies<sup>1</sup></i><br>One Western culture<br>One non-Western/U.S. minority culture                            | 3<br>3            | ANSC 293, 294, 295, 299, or 396<br>ANSC 298<br>ANSC 498                                                                                                                                                                                                                                                                                                                                                                                                                   | ≥1<br>1<br>2     |
| <i>Foreign Language<sup>2</sup></i>                                                                                            |                   | <b>TECHNOLOGY &amp; MANAGEMENT CONCENTRATION REQUIRED</b>                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |
| <i>Quantitative Reasoning I</i><br>MATH 220, 221, or 234                                                                       | 4-5               | <i>Four courses selected from: [list A]</i><br>ANSC 119, ANSC 201, ANSC 204, ANSC 205, ANSC 206, ANSC 207, ANSC 209, ANSC 211, ANSC 213, ANSC 250, ANSC 310, ANSC 312, ANSC 313, ANSC 314, ANSC 400, ANSC 401, ANSC 402, ANSC 403, ANSC 404, ANSC 405, ANSC 409, ANSC 435, or ANSC 437                                                                                                                                                                                    |                  |
| <i>Quantitative Reasoning II</i><br>Statistics <sup>3</sup>                                                                    | 3-4               | <i>Two courses selected from: [list B]</i><br>ANSC 232, ANSC 306, ANSC 340, ANSC 350, ANSC 363, ANSC 406, ANSC 420, ANSC 421, ANSC 422, ANSC 431, ANSC 438, ANSC 440, ANSC 441, ANSC 444, ANSC 445, ANSC 446, ANSC 448, ANSC 449, ANSC 450, ANSC 451, ANSC 452, ANSC 453, ANSC 466, ANSC 467, ANSC 509, ANSC 510, ANSC 520, ANSC 521, ANSC 522, ANSC 523, ANSC 524, ANSC 525, ANSC 530, ANSC 531, ANSC 533, ANSC 541, ANSC 542, ANSC 543, ANSC 545, ANSC 554, or ANSC 561 |                  |
| <i>Natural Sciences and Technology</i><br>CHEM 102 and 103<br>CHEM 104 and 105 <sup>4</sup><br>MCB 100 and 101                 | 3,1<br>3,1<br>3,2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |
| <i>Humanities and the Arts<sup>1</sup></i>                                                                                     | 6                 | <b>ACES Electives<br/>Open Electives<sup>6</sup></b><br><br>Pre-veterinary students must account for the course requirements of the respective College of Veterinary Medicine when choosing electives. <sup>6</sup>                                                                                                                                                                                                                                                       |                  |
| <i>Social and Behavioral Sciences</i><br>ACE 100 or ECON 102<br>One other Social and Behavioral Sciences course <sup>1,5</sup> | 3-4<br>3-4        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |
| <b>ACES REQUIRED</b><br>ACES 101                                                                                               | 2                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |
|                                                                                                                                |                   | <b>Total Hours</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |
|                                                                                                                                |                   | 126                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |

1 For completing Gen Ed requirements, consult with your academic advisor and refer to the most current Gen Ed approved list available [www.courses.illinois.edu/gened](http://www.courses.illinois.edu/gened).

2 Course work at or above the third level is required for graduation.

3 Select from ACE 261; CPSC 241; ECON 202; MATH 161; PSYC 235; SOC 280; or STAT 100.

4 Biological version is recommended.

5 Cannot be an Economics course.

6 Students should consider taking advantage of approved internship and/or study abroad credit for fulfilling open elective hours or other curriculum requirements.

## Example Course Schedule: Technology and Management Concentration

### *Freshman Fall Semester*

|                           |              |
|---------------------------|--------------|
| ACES 101                  | 2            |
| ANSC 100                  | 4            |
| MATH 234 or 220           | 4-5          |
| CMN 111/101 or RHET 105   | 3-4          |
| CHEM 102                  | 3            |
| CHEM 103                  | 1            |
| <b>TOTAL FOR SEMESTER</b> | <b>17-19</b> |

### *Freshman Spring Semester*

|                                           |              |
|-------------------------------------------|--------------|
| ANSC 101                                  | 3            |
| ACE 100 or ECON 102                       | 3-4          |
| CMN 112/101 or RHET 105                   | 3-4          |
| CHEM 104                                  | 3            |
| CHEM 105                                  | 1            |
| Humanities or Social Science <sup>a</sup> | 3            |
| <b>TOTAL FOR SEMESTER</b>                 | <b>16-18</b> |

### *Sophomore Fall Semester*

|                                           |           |
|-------------------------------------------|-----------|
| ANSC 298 <sup>b</sup>                     | 1         |
| ANSC 221                                  | 3         |
| ANSC 222                                  | 3         |
| Humanities or Social Science <sup>a</sup> | 3         |
| STAT 100                                  | 3         |
| <b>TOTAL FOR SEMESTER</b>                 | <b>13</b> |

### *Sophomore Spring Semester*

|                           |           |
|---------------------------|-----------|
| ANSC 103 <sup>b</sup>     | 2         |
| ANSC 223                  | 3         |
| ANSC 224                  | 4         |
| CHEM 232 <sup>c,d,e</sup> | 3         |
| CHEM 233 <sup>c,d,e</sup> | 2         |
| <b>TOTAL FOR SEMESTER</b> | <b>14</b> |

### *Junior Fall Semester*

|                           |           |
|---------------------------|-----------|
| ANSC [List A]             | 3         |
| ANSC [List B]             | 3         |
| Humanities                | 3         |
| MCB 100                   | 3         |
| MCB 101                   | 2         |
| Electives <sup>d,e</sup>  | 3         |
| <b>TOTAL FOR SEMESTER</b> | <b>17</b> |

### *Junior Spring Semester*

|                           |           |
|---------------------------|-----------|
| ANSC [List A]             | 3         |
| ANSC [List B]             | 3         |
| ANSC 295                  | 4         |
| Advanced COMP             | 3         |
| Electives <sup>d,e</sup>  | 3         |
| <b>TOTAL FOR SEMESTER</b> | <b>16</b> |

### *Senior Fall Semester*

|                           |           |
|---------------------------|-----------|
| ANSC [List A]             | 3         |
| ANSC 498 <sup>f</sup>     | 2         |
| Cultural Studies          | 3         |
| Electives <sup>d,e</sup>  | 8         |
| <b>TOTAL FOR SEMESTER</b> | <b>16</b> |

### *Senior Spring Semester*

|                           |           |
|---------------------------|-----------|
| ANSC [List A]             | 3         |
| Cultural Studies          | 3         |
| Electives <sup>d,e</sup>  | 10        |
| <b>TOTAL FOR SEMESTER</b> | <b>16</b> |

**TOTAL CREDITS MINIMUM = 126**

<sup>a</sup>Students may choose Humanities and/or Social Science courses that also satisfy the Cultural Studies requirements, thereby opening up the opportunity to choose other courses to satisfy the additional elective hours.

<sup>b</sup>ANSC 103 and ANSC 298 must be completed by the end of the Sophomore year. Each course may be taken in either the Fall or Spring semesters.

<sup>c</sup>Not required; counts toward elective credits. Students pursuing a minor in Chemistry or admission to a Veterinary Medicine Program should consider using their elective credits hours to meet expected course work of that program.

<sup>d</sup>Students pursuing admission to a Veterinary Medicine Program should consider using their elective credits hours to meet expected course work of that program, including: CHEM 232 and 233, PHYS 101 and 102, ANSC 350 or MCB 450. Note: some Colleges of Veterinary Medicine also require a second semester of organic chemistry.

<sup>e</sup>Students pursuing a minor in Chemistry should consider using their elective credit hours to meet expected course work of that minor which requires 20 hours of chemistry course work. Additional courses that may be used to complete the Chemistry minor beyond CHEM 102/103 and 104/105 may include CHEM 232 and 233, MCB 450, CHEM 332, and CHEM 494. CHEM 101 may not be used as part of the 20 hours.

<sup>f</sup>ANSC 498 should be taken in either the first or second semester of the Senior year.



## Appendix C. Course Lists for ANSC Concentrations

### List A Courses: [Applied Animal Sciences]

|          |                                 |          |                               |
|----------|---------------------------------|----------|-------------------------------|
| ANSC 119 | Meat Technology                 | ANSC 313 | Horse Appraisal               |
| ANSC 201 | Principles of Dairy Production  | ANSC 314 | Adv Dairy Cattle Evaluation   |
| ANSC 204 | Intro Dairy Cattle Evaluation   | ANSC 400 | Dairy Herd Management         |
| ANSC 205 | World Animal Resources          | ANSC 401 | Beef Production               |
| ANSC 206 | Horse Management                | ANSC 402 | Sheep Production              |
| ANSC 207 | Companion Animal Biology & Care | ANSC 403 | Pork Production               |
| ANSC 209 | Meat Animal Carcass Eval        | ANSC 404 | Poultry Science               |
| ANSC 211 | Breeding Animal Evaluation      | ANSC 405 | Advanced Dairy Management     |
| ANSC 213 | Beef and Swine Management       | ANSC 409 | Meat Science                  |
| ANSC 250 | Companion Animals in Society    | ANSC 423 | Advanced Dairy Nutrition      |
| ANSC 310 | Meat Selection and Grading      | ANSC 435 | Milk Quality and Udder Health |
| ANSC 312 | Advanced Livestock Evaluation   | ANSC 437 | Adv Reproductive Management   |

### List B Courses: [Basic Animal Sciences]

|          |                                |          |                                |
|----------|--------------------------------|----------|--------------------------------|
| ANSC 232 | Stem Cell Basics & Application | ANSC 453 | Stem Cell Biology              |
| ANSC 306 | Equine Science                 | ANSC 466 | Animal Behavior                |
| ANSC 340 | Plant and Animal Genetics      | ANSC 467 | Applied Animal Ecology         |
| ANSC 350 | Cellular Metabolism in Animals | ANSC 509 | Muscle Biology                 |
| ANSC 363 | Behavior of Domestic Animals   | ANSC 510 | Science of Animal Well-Being   |
| ANSC 406 | Zoo Animal Conservation Sci    | ANSC 520 | Protein and Energy Nutrition   |
| ANSC 420 | Ruminant Nutrition             | ANSC 521 | Regulation of Metabolism       |
| ANSC 421 | Minerals and Vitamins          | ANSC 522 | Advanced Ruminant Nutrition    |
| ANSC 422 | Companion Animal Nutrition     | ANSC 523 | Techniques in Animal Nutrition |
| ANSC 431 | Advanced Reproductive Biology  | ANSC 524 | Nonruminant Nutrition Concepts |
| ANSC 438 | Lactation Biology              | ANSC 525 | Topics in Nutrition Research   |
| ANSC 440 | Applied Statistical Methods I  | ANSC 530 | Advanced Endocrinology         |
| ANSC 441 | Human Genetics                 | ANSC 531 | Adv Reproductive Endocrinol    |
| ANSC 444 | Applied Animal Genetics        | ANSC 533 | Repro Physiology Lab Methods   |
| ANSC 445 | Statistical Methods            | ANSC 541 | Regression Analysis            |
| ANSC 446 | Population Genetics            | ANSC 542 | Applied Bioinformatics         |
| ANSC 448 | Math Modeling in Life Sciences | ANSC 543 | Bioinformatics                 |
| ANSC 449 | Biological Modeling            | ANSC 545 | Statistical Genomics           |
| ANSC 450 | Comparative Immunobiology      | ANSC 554 | Immunobiological Methods       |
| ANSC 451 | Microbes and the Anim Indust   | ANSC 561 | Animal Stress Physiology       |
| ANSC 452 | Animal Growth & Development    |          |                                |