JP: 10KL5889BS & 1PKS5889MANS: JP: ANIMAL SCIENCES BS & MANSC

Completed Workflow

1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
2. 1538 Head (rwjohn@illinois.edu; jrevans@illinois.edu)
3. KL Committee Chair (bjgray2@illinois.edu)
4. KL Dean (aball@illinois.edu)
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9. Senate (jtempel@illinois.edu)
10. U Senate Conf (none)
11. Board of Trustees (none)
12. IBHE (none)
13. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

Approval Path

1. Mon, 23 Sep 2019 14:05:11 GMT
   Deb Forgacs (dforgacs): Approved for U Program Review
2. Mon, 23 Sep 2019 18:09:55 GMT
   Rodney W. Johnson (rwjohn): Approved for 1538 Head
3. Wed, 09 Oct 2019 18:17:51 GMT
   Anthony Yannarell (acyann): Approved for KL Committee Chair
4. Thu, 10 Oct 2019 17:57:29 GMT
   Anna Ball (aball): Approved for KL Dean
5. Thu, 10 Oct 2019 18:02:38 GMT
   John Wilkin (jpwilkin): Approved for University Librarian
6. Wed, 20 Nov 2019 01:05:39 GMT
   Allison McKinney (agrindly): Approved for Grad_College
7. Wed, 20 Nov 2019 01:18:54 GMT
   Kathy Martensen (kmartens): Approved for Provost
8. Tue, 10 Dec 2019 15:44:06 GMT
   Barbara Lehman (bjlehman): Approved for Senate EPC
9. Wed, 12 Feb 2020 22:15:19 GMT
   Jennifer Roether (jtempel): Approved for Senate
10. Thu, 27 Feb 2020 00:20:42 GMT
    Kathy Martensen (kmartens): Approved for U Senate Conf
11. Tue, 17 Mar 2020 20:40:28 GMT
    Kathy Martensen (kmartens): Approved for Board of Trustees
12. Fri, 17 Apr 2020 22:06:13 GMT
    Kathy Martensen (kmartens): Approved for IBHE
13. Thu, 28 May 2020 16:06:04 GMT
    Emily Stuby (eastuby): Approved for DMI

History

1. May 28, 2020 by Sandra Rodriguez-Zas (rodrgzzs)

Date Submitted:Tue, 17 Nov 2020 22:00:51 GMT

Viewing:JP: 10KL5889BS & 1PKS5889MANS : JP: Animal Sciences BS & MANSC

Changes proposed by: Sandra Rodriguez-Zas

Proposal Type

Proposal Type:

Joint Program (ex. Master of Public Health & PhD. in Community Health)

This proposal is for a:

Revision

Proposal Title:

If this proposal is one piece of a multi-element change please include the other impacted programs here.*example: A BS revision with multiple concentration revisions*

Revisions to the 4+1 BS/MANSC (key 881) due to the program requirements changes and addition of online delivery to the Animal Sciences, MANSC. The revisions also impact Animal Sciences, MANSC (key 520) and
4+1BS(CS+ANSC)/MANSC (key 887)degrees.

EP Control Number

EP.21.035

Official Program Name

JP. Animal Sciences BS & MANSC

Effective Catalog Term

Fall 2021

Sponsor College

Agr, Consumer, & Env Sciences

Sponsor Department

Animal Sciences

Sponsor Name

Sandra Rodriguez Zas

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Program Description and Justification

Justification for proposal change:

A revision on the non-thesis Master of Animal Sciences (MANSC) degree requirements is proposed. This revision does not impact the BS component of this joint program.
The Department of Animal Sciences (ANSC) has offered the non-thesis Master of Animal Sciences (MANSC) program since 2018 and 13 students have graduated or are in the process of completing graduation requirements. Surveys and feedback from students and faculty guide the proposed revision of the program requirements. The revisions will also impact the 4+1 BS/MANSC and the 4+1BS(CS+ANSC)/MANSC degrees.
The proposed revisions address two needs. First, the curriculum changes reflect the academic preparation needs communicated by the MANSC graduates. Second, the curriculum modifications enhance the alignment of learning experiences and opportunities between the students in the MANSC and in the traditional with-thesis Master of Science in Animal Sciences (MS) program. This alignment has been recommended by faculty advisors, instructors, and students in consideration that MANSC and MS students share advisors and may also share some research experiences and course work.
The proposed curricula changes include: a) higher flexibility on the statistic coursework requirements, b) enhanced research project experience, and c) higher flexibility on the credit hour requirement. The revised MANSC program is characterized by: i) overall requirement of 32 credit hours, ii) 12 credit hours of 500-level coursework, iii) 2 credit hour seminar requirement; and iii) at least 12 credit hours in ANSC course offerings. The present MANSC program is characterized by: i) overall requirement of 32 credit hours, ii) at least 12 credit hours of 500-level coursework, iii) 2 credit hour seminar requirement; and iii) at least 20 credit hours in ANSC course offerings.
The revision in the minimum number of credit hours in a statistics course is motivated by two factors, a) the post-graduation careers of many MANSC graduates do not require the statistical analysis expertise resulting from the present requirements, and b) some MANSC research studies (ANSC 593) are adequately supported by fewer credit hours in statistics and data analytics training than the present requirements. The revision of the maximum number of research project credit hours corresponds to the average commitment of MANSC students to impactful and enriching research studies (ANSC 593) mentored by ANSC faculty members. The revised requirement of 12 credit hours of 500-level offerings reflects the abundance of advanced 400-level courses in multiple areas of animal sciences that can benefit the students.
The MANSC program can be completed independent of other programs, or jointly with two baccalaureate (BS) programs, the ANSC 4+1 BS/ MANSC and the 4+1 BS(CS+ANSC)/MANSC. Parallel petitions are proposed to all three implementations of the MANSC program. The undergraduate requirements for the ANSC BS and the CS+ANSC BS remain unchanged.
The proposed revision to the MANSC program enables ANSC to continue offering advanced and timely graduate-level preparation, ensuring their competitiveness in the labor market or pursue of professional degrees. The revised MANSC program advances the land grant mission of the University of Illinois (UofI), College of ACES and Department of Animal Sciences, strengthens the competitiveness of the corresponding academic units, addresses industry workforce needs, and enhances the likelihood that our graduates will secure high-paying and high-ranking jobs in the areas of food production, health and well-being, environmental conservation, and sustainability.

Is this program interdisciplinary?

No

Identify the existing programs to be joined:

Corresponding Program(s)
Animal Sciences, BS
Animal Sciences, MANSC (on campus online)

Academic Level

Graduate
Undergraduate

CIP Code

01.0901 - 01.0901

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Admission Requirements

Desired Effective Admissions Term

Fall 2021

Is this revision a change to the admission status of the program?

No

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

The proposed revisions to the MANSC graduation requirements do not impact the admission requirements.

* Students enrolled in the proposed joint program will be able to apply a maximum of 12 graduate-level (400- or 500-level) credit hours from their BS degree towards the MANSC degree requirements. The 4+1 program will permit students to graduate with B.S. and MANSC degrees in as early as 5 years. Credit hours from the BS degree that are applied towards a second major, a minor or a transcriptable certificate cannot be used towards the MANSC degree. TOEFL requirements follow the Graduate College requirements. Applicants are expected to submit GRE scores.
* Students enrolled in the BS program that have completed at least 60 credit hours of degree requirements and that have a minimum GPA of 3.0 are eligible to apply and be admitted to this program. Students that have a GPA above 2.75 may be admitted on probationary status. The Department of Animal Sciences will support the application to the MANSC program of the students in this joint program that have completed the required 126 credit hours towards a BS degree (including a minimum 40 hours of 300- or 400- level courses) and that have a minimum GPA of 3.0. Up to 12 graduate-level (400- or 500-level) credit hours from the BS program will count towards the 32 credit-hour requirement of the MANSC program.
* The existing stand-alone MANSC program has a 6 credit hour requirement of an independent research project (ANSC 592/593). This requirement aims to address potential gaps in hands-on research experiences that undergraduate students from other institutions may have because the majority of the UofI students in the Animal Sciences BS program have either for-credit (ANSC 398) or non-transcripted research experiences. Students in the proposed joint program have the option to substitute, partially or completely, the 6 credit hours of independent research required in the stand-alone MANSC program for graduate-level (400- or 500-level) coursework. This substitution must be petitioned and approved by the departmental faculty committee that also evaluates applications to the joint program. Substitutions will be granted to students that present evidence of research experiences comparable to that expected of MANSC graduates.

Describe how critical academic functions such as admissions and student advising are managed.

The proposed revisions to the MANSC graduation requirements do not impact the academic functions.

* A committee of Animal Sciences faculty will review the applications and determine admissions.
* The Department of Animal Sciences directors of graduate and undergraduate programs together with faulty members of the joint program committee will implement, oversee and regularly evaluate the progress of the program.
* All students in the joint program will have an undergraduate and a graduate studies advisor. Their joint advising will ensure the student receives guidance on academic activities that support the effective completion of the joint program requirements and target the students' career goals. Students pursuing independent studies credit hours will be advised by the faculty member overseeing the research project.

Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No significant impact in the enrollment and degree awarded is expected, though a 5% increase in either metric is likely in the next 5 years.

Estimated Annual Number of Degrees Awarded

Year One Estimate

5 (3 years after admission)

5th Year Estimate (or when fully implemented)

15

Delivery Method

Is this program available on campus and online?

No

This program is available:

On Campus

Budget

Are there budgetary implications for this revision?

No

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

Additional Budget Information

The proposed revision is not expected to have an impact on the budget.

The proposed program builds on existing undergraduate and graduate programs. No additional costs are anticipated because the existing programs and most of the animal sciences courses are at under-capacity. Students will be assessed tuition charges corresponding to the BS first, and once admitted by the Graduate College, tuition charges will correspond to those of the MANSC program. No campus or external resources will be requested. Students in the proposed program will be enrolled in the existing BS and MANSC programs and will take existing animal sciences courses (please refer to Appendix). The existing programs and most of the animal sciences courses are at under-capacity. The proposed joint program and the expected enrollment will make effective use of the resources in place. Students pursuing independent projects will benefit from ongoing researcher projects directed by animal sciences faculty. No new courses are proposed.

Resource Implications

Facilities

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

Technology

Will the program need additional technology beyond what is currently available for the unit?

No

Non-Technical Resources

Will the program require additional supplies, services or equipment (non-technical)?

No

Resources

For each of these items, be sure to include in the response if the proposed new program or change will result in replacement of another program(s). If so, which program(s), what is the anticipated impact on faculty, students, and instructional resources? Please attach any letters of support/ acknowledgement from faculty, students, and/or other impacted units as appropriate.

Attach File(s)

mansc_revision_lettersupportACE_seanfox_oct2020.docx

Faculty Resources

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc. Describe how the unit will support student advising, including job placement and/or admission to advanced studies.

The proposed revision is not expected to have an impact on faculty resources.

The progression of academic resources and degree demands evidenced in the departmental profiles (https://dmi.illinois.edu) support the expected enrollment in the proposed joint programs. In recent years, 7 junior tenure-track faculty and 3 specialized faculty have joined the Department of Animal Sciences, and all these positions have teaching responsibilities. Similar instructional hire trends are expected in the near future.
Since 2014, the number of undergraduate students in Animal Sciences has oscillated between 534 students (2014-2015) and 495 students (2017-2018) while the number of graduate students (master and doctoral levels) has oscillated between 99 students (2014-2015) and 89 students (2017-2016). Similar patterns are observed in the number of BS degrees ranging from 157 degrees (2015-2016) to 111 degrees (2018-2019) meanwhile the number of master's degrees ranged between 14 degrees (2014-2015) and 23 degrees (2017-2018). The number of BS degrees per faculty FTE has oscillated between 4.7 (2015-2016) and 3.4 (2018-2019) whereas the number of master's degrees per faculty FTE is 0.7 at present. The prior indicators demonstrate that the present conditions enable the Department of Animal Sciences to support the higher BS and MANSC enrollment numbers that are anticipated from the joint programs with no or minimal resource implications.

Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

The proposed revision is not expected to have an impact on the library resources.

Please refer to the Appendix.

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does the program include other courses/subjects impacted by the creation/revision of this program?

No

Financial Resources

How does the unit intend to financially support this proposal?

The proposed revision is not expected to change the present financial support offered by the unit.

The proposal integrates programs that already in place within the Department of Animal Sciences. The instructional resources are not at capacity and the education and mentoring of students in the proposed self-supported program will not result in additional fixed costs. Once the program is established, a potential minor increase in variable costs associated with additional teaching assistant support can be defrayed with income from the self-supported MANSC degree.

Will the unit need to seek campus or other external resources?

No

Are you seeking a change in the tuition rate or differential for this program?

No

Program Regulation and Assessment

Briefly describe the plan to assess and improve student learning, including the program's learning objectives; when, how, and where these learning objectives will be assessed; what metrics will be used to signify student's achievement of the stated learning objectives; and the process to ensure assessment results are used to improve student learning. (Describe how the program is aligned with or meets licensure, certification, and/or entitlement requirements, if applicable).

The learning objectives and learning outcomes assessment remain unchanged. Briefly, the MANSC graduate is expected to demonstrate: 1. Graduate-level understanding of essential concepts and approaches in the area of animal science specialization. 2. Capacity to execute a supervised research project including: a) understanding of the scientific method, research objectives, materials and methods, basic data analysis, and appreciation of the findings; and b) leadership on the implementation of essential research activities. 3. Ability to effectively communicate essential disciplinary knowledge and research project findings in oral and written formats.4. Aptitude to advocate for interdisciplinary research and education efforts to

improve food security, food safety, animal and human health and wellbeing or environmental stewardship. The required overall GPA >= 3 for graduation helps in the assessment of learning outcome #1. The discipline seminar aids in the assessment of learning outcomes #3. The graded research project report complement the assessment of learning outcomes #2 and #4. Program assessment information is summarized in a report and shared with the unit executive officer, faculty members at large and affiliated to the graduate program committee, and with members of the graduate student association. Outcomes from the annual study of enrollment, progression, and degree completion information will be discussed. Plans to address weaknesses will be developed in consultation with the previous stakeholders.

The program is not aligned with licensures or certifications.

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

Program of Study

"Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses" (source: https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf). For proposals for new bachelor's degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

All proposals must attach the new or revised version of the Academic Catalog program of study entry. Contact your college office if you have questions.

Revised programs

MANSC_Animal Science side-by-side_aug312020.xlsx

Attach a side-by-side comparison with the existing program AND, if the revision references or adds "chose-from" lists of courses students can select from to fulfill requirements, a listing of these courses, including the course rubric, number, title, and number of credit hours.

Catalog Page Text

Catalog Page Text: Description of program for the catalog page. This is not official content, it is used to help build the catalog pages for the program. Can be edited in the catalog by the college or department.

The joint BS/MANSC program in Animal Sciences integrates a baccalaureate (BS) in Animal Sciences preparation with a non-thesis Master of Animal Sciences (MANSC) preparation. Students enrolled in the BS in Animal Sciences program that have completed a minimum of 60 credit hours of degree requirements and that have a minimum GPA of 3.0 are eligible to apply and be admitted to this program. Students that have a GPA above 2.75 may be admitted on probationary status. The Department of Animal Sciences will support the application to the MANSC program of the students in this joint program that have completed the required 126 credit hours towards a BS in Animal Sciences degree (including a minimum of 40 hours of 300- or 400-level courses) and that have a minimum GPA of 3.0. Up to 12 graduate-level (400- or 500-level) credit hours from the BS program will count towards the 32 credit-hour requirement of the MANSC program.

Statement for Programs of Study Catalog

For the Degree of Bachelor of Science Major in Animal Sciences

Code	Title	Hours
Composition I and Speech		
RHET 105	Writing and Research (or equivalent) (see college Composition I requirement)	4
CMN 101	Public Speaking	3
Advanced Composition		

Select from campus approved list.		3-4
Cultural Studies		
Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists.		9
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	
CPSC 241	Intro to Applied Statistics	
ECON 202	Economic Statistics I	
PSYC 235	Intro to Statistics	
STAT 100	Statistics	
SOC 280	Intro to Social Statistics	
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5
Humanities and the Arts		
Courses selected from campus approved list		6
Social Sciences		
ECON 102	Microeconomic Principles	3
or ACE 100	Introduction to Applied Microeconomics	
Additional social or behavioral science course; cannot be an economics course.		3-4
ACES Required		
ACES 101	Contemporary Issues in ACES	2
Animal Sciences Required		
ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3
ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Undergraduate Seminar	1
ANSC 398	UG Experiential Learning[1]	1
ANSC 498	Integrating Animal Sciences	2

Other Requirements

Requirement	Description
Minimum 300- and 400- level courses included in the 126 hours for the B.S. degree	40
Minimum GPA:	3.0

[1] ANSC 398 only fulfills the degree requirement when taken for a standard letter grade.

For the Bachelor of Science students must choose one of the concentrations, Companion Animal & Equine Science, Food Animal Production & Management, or Science, Pre-Veterinary & Medical listed below:

Code	Title	Hours
Companion Animal and Equine Science Concentration Required		
Choose one group:[1]		6
ANSC 250 & ANSC 307	Companion Animals in Society and Companion Animal Management	
or		
ANSC 206 & ANSC 306	Horse Management and Equine Science	
Select two of the following Applied Sciences courses:[1]		6
ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management[1]	
ANSC 211	Breeding Animal Evaluation	
ANSC 219	Meat Technology	
ANSC 250	Companion Animals in Society[1]	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 306	Equine Science	
ANSC 307	Companion Animal Management[1]	
ANSC 309	Meat Production and Marketing	
ANSC 310	Meat Selection and Grading	
ANSC 312	Advanced Livestock Evaluation	
ANSC 313	Horse Appraisal	
ANSC 314	Adv Dairy Cattle Evaluation	
ANSC 322	Livestock Feeds and Feeding	
ANSC 370	Companion Animal Policy	
ANSC 400	Dairy Herd Management	
ANSC 401	Beef Production	
ANSC 402	Sheep and Goat Production	
ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 405	Advanced Dairy Management	
ANSC 407	Animal Shelter Management	
ANSC 424	Pet Food & Feed Manufacturing	
ANSC 435	Milk Quality and Udder Health	
ANSC 437	Adv Reproductive Management	
ANSC 471	ANSC Leaders & Entrepreneurs	
Select two of the following Basic Sciences courses:		6
ANSC 251	Epidemics and Infectious Diseases	
ANSC 331	Biology of Reproduction	
ANSC 350	Cellular Metabolism in Animals	
ANSC 363	Behavior of Domestic Animals	
ANSC 366	Animal Behavior	
ANSC 406	Zoo Animal Conservation Sci	
ANSC 409	Meat Science	
ANSC 420	Ruminant Nutrition	
ANSC 421	Minerals and Vitamins	
ANSC 422	Companion Animal Nutrition	
ANSC 431	Advanced Reproductive Biology	

ANSC 438	Lactation Biology	
ANSC 440	Applied Statistical Methods I	
ANSC 441	Human Genetics	
ANSC 444	Applied Animal Genetics	
ANSC 445	Statistical Methods	
ANSC 446	Population Genetics	
ANSC 447	Advanced Genetics and Genomics	
ANSC 448	Math Modeling in Life Sciences	
ANSC 449	Biological Modeling	
ANSC 450	Comparative Immunobiology	
ANSC 451	Microbes and the Anim Indust	
ANSC 452	Animal Growth and Development	
ANSC 453	Stem Cell Biology	
ANSC 467	Applied Animal Ecology	
ANSC 509	Muscle Biology	
ANSC 510	Course ANSC 510 Not Found	
ANSC 520	Protein and Energy Nutrition	
ANSC 521	Regulation of Metabolism	
ANSC 522	Advanced Ruminant Nutrition	
ANSC 523	Techniques in Animal Nutrition	
ANSC 524	Nonruminant Nutrition Concepts	
ANSC 525	Topics in Nutrition Research	
ANSC 526	Adv Companion Animal Nutrition	
ANSC 533	Repro Physiology Lab Methods	
ANSC 541	Regression Analysis	
ANSC 542	Applied Bioinformatics	
ANSC 543	Bioinformatics	
ANSC 545	Statistical Genomics	
ANSC 554	Immunobiological Methods	
ANSC 561	Animal Stress Physiology	
Additional elective courses must be completed to yield at least 126 total Hours for graduation.		25-29
Total Hours		**126**

[1] ANSC 206, 250, 306 and 307 may NOT be used to meet more than one requirement.

Code	Title	Hours
Food Animal Production and Management Concentration Required		
Select four of the following Applied Sciences courses:		12
ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management	
ANSC 211	Breeding Animal Evaluation	
ANSC 219	Meat Technology	
ANSC 250	Companion Animals in Society	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 306	Equine Science	
ANSC 307	Companion Animal Management	
ANSC 309	Meat Production and Marketing	
ANSC 310	Meat Selection and Grading	
ANSC 312	Advanced Livestock Evaluation	
ANSC 313	Horse Appraisal	

ANSC 314	Adv Dairy Cattle Evaluation	
ANSC 322	Livestock Feeds and Feeding	
ANSC 370	Companion Animal Policy	
ANSC 400	Dairy Herd Management	
ANSC 401	Beef Production	
ANSC 402	Sheep and Goat Production	
ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 405	Advanced Dairy Management	
ANSC 407	Animal Shelter Management	
ANSC 424	Pet Food & Feed Manufacturing	
ANSC 435	Milk Quality and Udder Health	
ANSC 437	Adv Reproductive Management	
ANSC 471	ANSC Leaders & Entrepreneurs	
Select two of the following Basic Sciences courses:		6
ANSC 251	Epidemics and Infectious Diseases	
ANSC 331	Biology of Reproduction	
ANSC 350	Cellular Metabolism in Animals	
ANSC 363	Behavior of Domestic Animals	
ANSC 366	Animal Behavior	
ANSC 406	Zoo Animal Conservation Sci	
ANSC 409	Meat Science	
ANSC 420	Ruminant Nutrition	
ANSC 421	Minerals and Vitamins	
ANSC 422	Companion Animal Nutrition	
ANSC 431	Advanced Reproductive Biology	
ANSC 438	Lactation Biology	
ANSC 440	Applied Statistical Methods I	
ANSC 441	Human Genetics	
ANSC 444	Applied Animal Genetics	
ANSC 445	Statistical Methods	
ANSC 446	Population Genetics	
ANSC 447	Advanced Genetics and Genomics	
ANSC 448	Math Modeling in Life Sciences	
ANSC 449	Biological Modeling	
ANSC 450	Comparative Immunobiology	
ANSC 451	Microbes and the Anim Indust	
ANSC 452	Animal Growth and Development	
ANSC 453	Stem Cell Biology	
ANSC 467	Applied Animal Ecology	
ANSC 509	Muscle Biology	
ANSC 510	Course ANSC 510 Not Found	
ANSC 520	Protein and Energy Nutrition	
ANSC 521	Regulation of Metabolism	
ANSC 522	Advanced Ruminant Nutrition	
ANSC 523	Techniques in Animal Nutrition	
ANSC 524	Nonruminant Nutrition Concepts	
ANSC 525	Topics in Nutrition Research	
ANSC 526	Adv Companion Animal Nutrition	
ANSC 533	Repro Physiology Lab Methods	
ANSC 541	Regression Analysis	
ANSC 542	Applied Bioinformatics	

ANSC 543	Bioinformatics	
ANSC 545	Statistical Genomics	
ANSC 554	Immunobiological Methods	
ANSC 561	Animal Stress Physiology	
Additional elective courses must be completed to yield at least 126 total Hours for graduation.		20-29
Total Hours		**126**

Code	Title	Hours
Science, Pre-Veterinary and Medical Concentration Required		
Select two of the following Applied Sciences courses:		6
ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management	
ANSC 211	Breeding Animal Evaluation	
ANSC 219	Meat Technology	
ANSC 250	Companion Animals in Society	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 306	Equine Science	
ANSC 307	Companion Animal Management	
ANSC 309	Meat Production and Marketing	
ANSC 310	Meat Selection and Grading	
ANSC 312	Advanced Livestock Evaluation	
ANSC 313	Horse Appraisal	
ANSC 314	Adv Dairy Cattle Evaluation	
ANSC 322	Livestock Feeds and Feeding	
ANSC 370	Companion Animal Policy	
ANSC 400	Dairy Herd Management	
ANSC 401	Beef Production	
ANSC 402	Sheep and Goat Production	
ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 405	Advanced Dairy Management	
ANSC 407	Animal Shelter Management	
ANSC 424	Pet Food & Feed Manufacturing	
ANSC 435	Milk Quality and Udder Health	
ANSC 437	Adv Reproductive Management	
ANSC 471	ANSC Leaders & Entrepreneurs	
Select four of the following Basic Sciences courses:		12
ANSC 251	Epidemics and Infectious Diseases	
ANSC 331	Biology of Reproduction	
ANSC 350	Cellular Metabolism in Animals	
ANSC 363	Behavior of Domestic Animals	
ANSC 366	Animal Behavior	
ANSC 406	Zoo Animal Conservation Sci	
ANSC 409	Meat Science	
ANSC 420	Ruminant Nutrition	
ANSC 421	Minerals and Vitamins	
ANSC 422	Companion Animal Nutrition	
ANSC 431	Advanced Reproductive Biology	
ANSC 438	Lactation Biology	
ANSC 440	Applied Statistical Methods I	

ANSC 441	Human Genetics
ANSC 444	Applied Animal Genetics
ANSC 445	Statistical Methods
ANSC 446	Population Genetics
ANSC 447	Advanced Genetics and Genomics
ANSC 448	Math Modeling in Life Sciences
ANSC 449	Biological Modeling
ANSC 450	Comparative Immunobiology
ANSC 451	Microbes and the Anim Indust
ANSC 452	Animal Growth and Development
ANSC 453	Stem Cell Biology
ANSC 467	Applied Animal Ecology
ANSC 509	Muscle Biology
ANSC 510	Course ANSC 510 Not Found
ANSC 520	Protein and Energy Nutrition
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ANSC 522	Advanced Ruminant Nutrition
ANSC 523	Techniques in Animal Nutrition
ANSC 524	Nonruminant Nutrition Concepts
ANSC 525	Topics in Nutrition Research
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ANSC 533	Repro Physiology Lab Methods
ANSC 541	Regression Analysis
ANSC 542	Applied Bioinformatics
ANSC 543	Bioinformatics
ANSC 545	Statistical Genomics
ANSC 554	Immunobiological Methods
ANSC 561	Animal Stress Physiology
Additional elective courses must be completed to yield at least 126 total Hours for graduation.	20-29
Total Hours	**126**

[1] ANSC 398 only fulfills the degree requirement when taken for a standard letter grade.

For the Degree of Master of Science in Animal Sciences Major in Animal Sciences

Code	Title	Hours
ANSC 590	Animal Sciences Seminar[1]	2
or ANSC 591	Grad Bioinformatics Seminar	
ANSC 440	Applied Statistical Methods I[1]	2 to 5
or ANSC 445	Statistical Methods	
or ANSC 448	Math Modeling in Life Sciences	
or ANSC 449	Biological Modeling	
Elective 400- or 500-level ANSC courses	(excludesANSC 590,ANSC 591,ANSC 593)[2]	17 to 20
ANSC 593	Res Studies in Animal Sciences[3]	8
Total Hours		**32**

Other Requirements

Requirement	Description
Other Requirements and conditions may overlap	
Maximum Hours Overall Required Within the Unit	12
Maximum graduate-level credit hours from the B.S. degree that will count towards the MANSC degree	12

Minimum 500-level Hours Required Overall	12
Minimum GPA:	3.0

1 Equivalent course requires departmental approval

2 In consultation with their Animal Sciences faculty advisor, students will select courses that support the individual research studies project and strengthen career opportunities.

3 The individual research studies project or internship experience and a written report will fulfill the ANSC 593 (Research Studies in Animal Sciences) capstone project requirement. The project or internship and the written product will be supervised by the Animal Sciences faculty mentor and provide evidence that the student can understand and apply the scientific method, interpret scientific information; and effectively communicate scientific information in a field of animal sciences.

EP Documentation

DMI Documentation

Banner/Codebook Name

BS: BS/MANSC Animal Sci - UIUC & MANSC:BS/MANCS Animal Sci-UIUC

Program Code:

JP. 10KL5889BS & 1PKS5889MANS

Conc Code

5889

Major Code

0002

Program Reviewer Comments

Kathy Martensen (kmartens) (Sat, 14 Nov 2020 16:21:56 GMT): Rollback: From: Moorhouse, Linda <moorhouz@illinois.edu> Sent: Thursday, November 12, 2020 12:02 PM To: Rodriguez Zas, Sandra Luisa <rodrgzzs@illinois.edu> Cc: Martensen, Kathy <kmartens@illinois.edu>; Gregg, Brianna J <bjgray2@illinois.edu> Subject: JP. Animal Sciences BS & MANSC and JP. Computer Science & Animal Sciences, BS & Animal Science, MANSC Hi Sandra: I'm looking at your joint program revisions in CIM-P. In both joint programs (CS+ANSC, BS/MANSC and BS/MANSC), there is a deactivated course listed in the undergrad "to choose from: lists. Does this need to come out of three course lists in the BS and the one course list in the CS+ANSC areas in the Academic Catalog or are you planning to replace it with something else? The course is ANSC 510.
Anna Ball (aball) (Mon, 16 Nov 2020 20:12:09 GMT): Rollback: See provost office comments on rollback
Deb Forgacs (dforgacs) (Tue, 17 Nov 2020 19:17:59 GMT): Rollback: requested.
Anna Ball (aball) (Fri, 20 Nov 2020 16:39:10 GMT): Rollback: Attachment needed

Key: 881

Academic Catalog program of study entries (BS, and MANSC)

Animal Sciences: Companion & Equine Science, BS

Degree Requirements for the degree of Bachelor of Science Major in Animal Sciences, Companion & Equine Science Concentration

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Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
RHET 105	Writing and Research (or equivalent) (see college Composition I requirement)	4
CMN 101	Public Speaking	3
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		
Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists.		9
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		4-5
MATH 220	Calculus	4
MATH 221	Calculus I	5
MATH 234	Calculus for Business I	4
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	4
CPSC 241	Intro to Applied Statistics	3

Code	Title	Hours
ECON 202	Economic Statistics I	3
PSYC 235	Intro to Statistics	3
STAT 100	Statistics	3
SOC 280	Intro to Social Statistics	4
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5
Humanities and the Arts		
Courses selected from campus approved list		6
Social Sciences		
ECON 102 or ACE 100	Microeconomic Principles Agr Cons and Resource Econ	3
Additional social or behavioral science course; cannot be an economics course.		3-4
ACES Required		
ACES 101	Contemporary Issues in ACES	2
Animal Sciences Required		
ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3
ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3

Code	Title	Hours
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Undergraduate Seminar	1
ANSC 398	UG Experiential Learning [1]	1
ANSC 498	Integrating Animal Sciences	2
Companion Animal and Equine Science Concentration Required		
Choose one group: [1]		6
ANSC 250 & ANSC 307	Companion Animals in Society and Companion Animal Management	3&3
or		
ANSC 206 & ANSC 306	Horse Management and Equine Science	3&3
Select two of the following Applied Sciences courses: [1]		6
ANSC 201	Principles of Dairy Production	3
ANSC 204	Intro Dairy Cattle Evaluation	2
ANSC 205	World Animal Resources	3
ANSC 206	Horse Management [1]	3
ANSC 211	Breeding Animal Evaluation	3
ANSC 219	Meat Technology	3
ANSC 250	Companion Animals in Society [1]	3
ANSC 301	Food Animal Production, Management, and Evaluation	3
ANSC 305	Human Animal Interactions	3
ANSC 306	Equine Science	3
ANSC 307	Companion Animal Management [1]	3

Code	Title	Hours
ANSC 309	Meat Production and Marketing	2
ANSC 310	Meat Selection and Grading	3
ANSC 312	Advanced Livestock Evaluation	3
ANSC 313	Horse Appraisal	2
ANSC 314	Adv Dairy Cattle Evaluation	2
ANSC 322	Livestock Feeds and Feeding	3
ANSC 370	Companion Animal Policy	3
ANSC 400	Dairy Herd Management	3
ANSC 401	Beef Production	3
ANSC 402	Sheep Production	3
ANSC 403	Pork Production	3
ANSC 404	Poultry Science	3
ANSC 405	Advanced Dairy Management	2
ANSC 407	Animal Shelter Management	3
ANSC 424	Pet Food & Feed Manufacturing	3
ANSC 435	Milk Quality and Udder Health	2
ANSC 437	Adv Reproductive Management	2
ANSC 471	ANSC Leaders & Entrepreneurs	3
Select two of the following Basic Sciences courses:		6
ANSC 251	Epidemics and Infectious Diseases	3
ANSC 331	Biology of Reproduction	2-4
ANSC 350	Cellular Metabolism in Animals	3
ANSC 363	Behavior of Domestic Animals	3

Code	Title	Hours
ANSC 366	Animal Behavior	3
ANSC 406	Zoo Animal Conservation Sci	3
ANSC 409	Meat Science	3
ANSC 420	Ruminant Nutrition	3
ANSC 421	Minerals and Vitamins	3
ANSC 422	Companion Animal Nutrition	3
ANSC 431	Advanced Reproductive Biology	3
ANSC 438	Lactation Biology	4
ANSC 440	Applied Statistical Methods I	4
ANSC 441	Human Genetics	3-4
ANSC 444	Applied Animal Genetics	3
ANSC 445	Statistical Methods	4
ANSC 446	Population Genetics	3-4
ANSC 447	Advanced Genetics and Genomics	4
ANSC 448	Math Modeling in Life Sciences	3-4
ANSC 449	Biological Modeling	3-4
ANSC 450	Comparative Immunobiology	4
ANSC 451	Microbes and the Anim Indust	3
ANSC 452	Animal Growth and Development	3-4
ANSC 453	Stem Cell Biology	3-4
ANSC 467	Applied Animal Ecology	3
ANSC 509	Muscle Biology	2
ANSC 510	Science of Animal Well-Being	

Code	Title	Hours
ANSC 520	Protein and Energy Nutrition	3
ANSC 521	Regulation of Metabolism	3
ANSC 522	Advanced Ruminant Nutrition	3
ANSC 523	Techniques in Animal Nutrition	3
ANSC 524	Nonruminant Nutrition Concepts	2
ANSC 525	Topics in Nutrition Research	1
ANSC 526	Adv Companion Animal Nutrition	3
ANSC 533	Repro Physiology Lab Methods	1-3
ANSC 541	Regression Analysis	5
ANSC 542	Applied Bioinformatics	4
ANSC 543	Bioinformatics	4
ANSC 545	Statistical Genomics	3-4
ANSC 554	Immunobiological Methods	3
ANSC 561	Animal Stress Physiology	2
Additional elective courses must be completed to yield at least 126 total Hours for graduation.		25-29
Total Hours		**126**

The required 126 hours must include a minimum of 40 hours of 300- and 400-level courses

or

Animal Sciences: Food Animal Production & Management, BS

Degree Requirements for the degree of Bachelor of Science Major in Animal Sciences, Food Animal Production & Management concentration

Code	Title	Hours
Composition I and Speech		
RHET 105	Writing and Research (or equivalent) (see college Composition I requirement)	4
CMN 101	Public Speaking	3

Code	Title	Hours
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		
Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists.		9
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		4-5
MATH 220	Calculus	4
MATH 221	Calculus I	5
MATH 234	Calculus for Business I	4
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	4
CPSC 241	Intro to Applied Statistics	3
ECON 202	Economic Statistics I	3
PSYC 235	Intro to Statistics	3
STAT 100	Statistics	3
SOC 280	Intro to Social Statistics	4
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5
Humanities and the Arts		
Courses selected from campus approved list		6
Social Sciences		
ECON 102 or ACE 100	Microeconomic Principles Agr Cons and Resource Econ	3
Additional social or behavioral science course; cannot be an economics course.		3-4
ACES Required		
ACES 101	Contemporary Issues in ACES	2
Animal Sciences Required		
ANSC 100	Intro to Animal Sciences	4

Code	Title	Hours
ANSC 101	Contemporary Animal Issues	3
ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Undergraduate Seminar	1
ANSC 398	UG Experiential Learning [1]	1
ANSC 498	Integrating Animal Sciences	2
Food Animal Production and Management Concentration Required		
Select four of the following Applied Sciences courses:		12
ANSC 201	Principles of Dairy Production	3
ANSC 204	Intro Dairy Cattle Evaluation	2
ANSC 205	World Animal Resources	3
ANSC 206	Horse Management	3
ANSC 211	Breeding Animal Evaluation	3
ANSC 219	Meat Technology	3
ANSC 250	Companion Animals in Society	3
ANSC 301	Food Animal Production, Management, and Evaluation	3
ANSC 305	Human Animal Interactions	3
ANSC 306	Equine Science	3
ANSC 307	Companion Animal Management	3
ANSC 309	Meat Production and Marketing	2
ANSC 310	Meat Selection and Grading	3
ANSC 312	Advanced Livestock Evaluation	3
ANSC 313	Horse Appraisal	2
ANSC 314	Adv Dairy Cattle Evaluation	2
ANSC 322	Livestock Feeds and Feeding	3
ANSC 370	Companion Animal Policy	3
ANSC 400	Dairy Herd Management	3
ANSC 401	Beef Production	3
ANSC 402	Sheep Production	3
ANSC 403	Pork Production	3
ANSC 404	Poultry Science	3
ANSC 405	Advanced Dairy Management	2

Code	Title	Hours
ANSC 407	Animal Shelter Management	3
ANSC 424	Pet Food & Feed Manufacturing	3
ANSC 435	Milk Quality and Udder Health	2
ANSC 437	Adv Reproductive Management	2
ANSC 471	ANSC Leaders & Entrepreneurs	3
Select two of the following Basic Sciences courses:		6
ANSC 251	Epidemics and Infectious Diseases	3
ANSC 331	Biology of Reproduction	2-4
ANSC 350	Cellular Metabolism in Animals	3
ANSC 363	Behavior of Domestic Animals	3
ANSC 366	Animal Behavior	3
ANSC 406	Zoo Animal Conservation Sci	3
ANSC 409	Meat Science	3
ANSC 420	Ruminant Nutrition	3
ANSC 421	Minerals and Vitamins	3
ANSC 422	Companion Animal Nutrition	3
ANSC 431	Advanced Reproductive Biology	3
ANSC 438	Lactation Biology	4
ANSC 440	Applied Statistical Methods I	4
ANSC 441	Human Genetics	3-4
ANSC 444	Applied Animal Genetics	3
ANSC 445	Statistical Methods	4
ANSC 446	Population Genetics	3-4
ANSC 447	Advanced Genetics and Genomics	4
ANSC 448	Math Modeling in Life Sciences	3-4
ANSC 449	Biological Modeling	3-4
ANSC 450	Comparative Immunobiology	4
ANSC 451	Microbes and the Anim Indust	3
ANSC 452	Animal Growth and Development	3-4
ANSC 453	Stem Cell Biology	3-4
ANSC 467	Applied Animal Ecology	3
ANSC 509	Muscle Biology	2
ANSC 510	Science of Animal Well-Being	
ANSC 520	Protein and Energy Nutrition	3
ANSC 521	Regulation of Metabolism	3

Code	Title	Hours
ANSC 522	Advanced Ruminant Nutrition	3
ANSC 523	Techniques in Animal Nutrition	3
ANSC 524	Nonruminant Nutrition Concepts	2
ANSC 525	Topics in Nutrition Research	1
ANSC 526	Adv Companion Animal Nutrition	3
ANSC 533	Repro Physiology Lab Methods	1-3
ANSC 541	Regression Analysis	5
ANSC 542	Applied Bioinformatics	4
ANSC 543	Bioinformatics	4
ANSC 545	Statistical Genomics	3-4
ANSC 554	Immunobiological Methods	3
ANSC 561	Animal Stress Physiology	2
Additional elective courses must be completed to yield at least 126 total Hours for graduation.		20-29
Total Hours		**126**

The required 126 hours must include a minimum of 40 hours of 300- and 400-level courses

or

Animal Sciences: Science, Pre-Veterinary & Medical, BS

Degree Requirements for the degree of Bachelor of Science Major in Animal Sciences, Science, Pre-Veterinary & Medical concentration

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Prescribed Courses including Campus General Education

Code	Title	Hours
Composition I and Speech		
RHET 105	Writing and Research (or equivalent) (see college Composition I requirement)	4
CMN 101	Public Speaking	3
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		
Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists.		9
Foreign Language		
Coursework at or above the third level is required for graduation.		
Quantitative Reasoning I		
Select one of the following:		4-5
MATH 220	Calculus	4
MATH 221	Calculus I	5

Code	Title	Hours
MATH 234	Calculus for Business I	4
Quantitative Reasoning II		
Select one of the following:		3-4
ACE 261	Applied Statistical Methods	4
CPSC 241	Intro to Applied Statistics	3
ECON 202	Economic Statistics I	3
PSYC 235	Intro to Statistics	3
STAT 100	Statistics	3
SOC 280	Intro to Social Statistics	4
Natural Sciences and Technology		
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5
Humanities and the Arts		
Courses selected from campus approved list		6
Social Sciences		
ECON 102 or ACE 100	Microeconomic Principles Agr Cons and Resource Econ	3
Additional social or behavioral science course; cannot be an economics course.		3-4
ACES Required		
ACES 101	Contemporary Issues in ACES	2
Animal Sciences Required		
ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3
ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Undergraduate Seminar	1
ANSC 398	UG Experiential Learning [1]	1
ANSC 498	Integrating Animal Sciences	2

Course List

[1] ANSC 398 only fulfills the degree requirement when taken for a standard letter grade.

Code	Title	Hours
Science, Pre-Veterinary and Medical Concentration Required		
Select two of the following Applied Sciences courses:		6
ANSC 201	Principles of Dairy Production	3
ANSC 204	Intro Dairy Cattle Evaluation	2
ANSC 205	World Animal Resources	3
ANSC 206	Horse Management	3
ANSC 211	Breeding Animal Evaluation	3
ANSC 219	Meat Technology	3
ANSC 250	Companion Animals in Society	3
ANSC 301	Food Animal Production, Management, and Evaluation	3
ANSC 305	Human Animal Interactions	3
ANSC 307	Companion Animal Management	3
ANSC 309	Meat Production and Marketing	3
ANSC 310	Meat Selection and Grading	2
ANSC 312	Advanced Livestock Evaluation	3
ANSC 313	Horse Appraisal	3
ANSC 314	Adv Dairy Cattle Evaluation	2
ANSC 322	Livestock Feeds and Feeding	2
ANSC 370	Companion Animal Policy	3
ANSC 400	Dairy Herd Management	3
ANSC 401	Beef Production	3
ANSC 402	Sheep Production	3
ANSC 403	Pork Production	3
ANSC 404	Poultry Science	3
ANSC 405	Advanced Dairy Management	3
ANSC 407	Animal Shelter Management	2
ANSC 424	Pet Food & Feed Manufacturing	3
ANSC 435	Milk Quality and Udder Health	3
ANSC 437	Adv Reproductive Management	2
ANSC 471	ANSC Leaders & Entrepreneurs	2
Select four of the following Basic Sciences courses:		12
ANSC 251	Epidemics and Infectious Diseases	3
ANSC 306	Equine Science	2-4
ANSC 331	Biology of Reproduction	3

Code	Title	Hours
ANSC 350	Cellular Metabolism in Animals	3
ANSC 363	Behavior of Domestic Animals	3
ANSC 366	Animal Behavior	3
ANSC 406	Zoo Animal Conservation Sci	3
ANSC 409	Meat Science	3
ANSC 420	Ruminant Nutrition	3
ANSC 421	Minerals and Vitamins	3
ANSC 422	Companion Animal Nutrition	3
ANSC 431	Advanced Reproductive Biology	4
ANSC 438	Lactation Biology	4
ANSC 440	Applied Statistical Methods I	3-4
ANSC 441	Human Genetics	3
ANSC 444	Applied Animal Genetics	4
ANSC 445	Statistical Methods	3-4
ANSC 446	Population Genetics	4
ANSC 447	Advanced Genetics and Genomics	3-4
ANSC 448	Math Modeling in Life Sciences	3-4
ANSC 449	Biological Modeling	4
ANSC 450	Comparative Immunobiology	3
ANSC 451	Microbes and the Anim Indust	3-4
ANSC 452	Animal Growth and Development	3-4
ANSC 453	Stem Cell Biology	3
ANSC 467	Applied Animal Ecology	2
ANSC 509	Muscle Biology	
ANSC 510	Science of Animal Well-Being	3
ANSC 520	Protein and Energy Nutrition	3
ANSC 521	Regulation of Metabolism	3
ANSC 522	Advanced Ruminant Nutrition	3
ANSC 523	Techniques in Animal Nutrition	2
ANSC 524	Nonruminant Nutrition Concepts	1
ANSC 525	Topics in Nutrition Research	3
ANSC 526	Adv Companion Animal Nutrition	1-3
ANSC 533	Repro Physiology Lab Methods	5
ANSC 541	Regression Analysis	4
ANSC 542	Applied Bioinformatics	4

Code	Title	Hours
ANSC 543	Bioinformatics	3-4
ANSC 545	Statistical Genomics	3
ANSC 554	Immunobiological Methods	2
ANSC 561	Animal Stress Physiology	3
Additional elective courses must be completed to yield at least 126 total Hours for graduation.		20-29
Total Hours		**126**

The required 126 hours must include a minimum of 40 hours of 300- and 400-level courses

And

Animal Sciences, MANSC

Degree Requirements

Code	Title	Hours
ANSC 590	Animal Sciences Seminar	2
ANSC 440	Applied Statistical Methods I	4
or ANSC 445	Statistical Methods	
500-level courses		6
(excludes ANSC 590, ANSC 592, ANSC 593)		
400- or 500-level ANSC courses		6
(excludes ANSC 590, ANSC 592, ANSC 593, ANSC 440, ANSC 445)		
Other graduate-level electives		8
(excludes ANSC 590, ANSC 592, ANSC 593, ANSC 440, ANSC 445)		
ANSC 592	Adv Topics in Animal Science	6
or ANSC 593	Res Studies in Animal Sciences	
Total Hours		**32**

* A maximum of 12 graduate-level credit hours from the B.S. degree will count towards the MANSC degree

Current Program Requirements

Code	Title	Hours
ANSC 590	Animal Sciences Seminar	2
ANSC 440 or ANSC 445	Applied Statistical Methods I or Statistical Methods	4
500-level courses (excludes ANSC 590, ANSC 592, ANSC 593)		6
400- or 500-level ANSC courses (excludes ANSC 590, ANSC 592, ANSC 593, ANSC 440, ANSC 445)		6
Other graduate-level electives (excludes ANSC 590, ANSC 592, ANSC 593, ANSC 440, ANSC 445)		8
ANSC 592 or ANSC 593	Adv Topics in Animal Science or Res Studies in Animal Sciences	6
Total Hours		**32**

Other Requirements
Other Requirements and conditions may overlap
Minimum GPA: 3.0

ANSC 592 or ANSC 593 Research Studies:

•In consultation with their faculty advisor, students will select courses that support the individual research studies project and strengthen career opportunities. The individual research studies project or internship experience and a written report will fulfill the ANSC 592 (Advanced Topics in Animal Science) or ANSC 593 (Research Studies in Animal Sciences) capstone project requirement. The project or internship and the written product provide evidence that the student:

i) understands and can apply the scientific method;

ii) has the capability to analyze and interpret scientific information; and

iii) can effectively communicate scientific information in a field of animal sciences. The written product will follow the format

Revised Program Requirements

Code	Title	Hours
ANSC 590, ANSC 591, or approved equivalent[1]	Animal Sciences Seminar	2
ANSC 440, ANSC 445, ANSC 448, ANSC 449, or approved equivalent[1]	One course in statistics or data analytics	2 - 5
Elective 400 and 500-level graded coursework (excludes ANSC 590, ANSC 591, ANSC 593)[2]		17 - 20
ANSC 593[3]	Res Studies in Animal Sciences	8
Total Hours		**32**

Other Requirements
Minimum Hours Required within the Unit: 12
Minimum 500-level Hours Required Overall: 12

Minimum GPA: 3.0

[1]equivalent course requires departmental approval

[2]In consultation with their Animal Sciences faculty advisor, students will select courses that support the individual research studies project and strengthen career opportunities.

[3]The individual research studies project or internship experience and a written report will fulfill the ANSC 593 (Research Studies in Animal Sciences) capstone project requirement. The project or internship and the written product will be supervised by the Animal Sciences faculty mentor and provide evidence that the student can understand and apply the scientific method, interpret scientific information; and effectively communicate scientific information in a field of animal sciences.

ILLINOIS

COLLEGE OF AGRICULTURAL, CONSUMER
& ENVIRONMENTAL SCIENCES

Department of Agricultural & Consumer Economics
326 Mumford Hall, MC-710
1301 W. Gregory Drive
Urbana, IL 61801

October 8, 2020

Dr. Rodney W. Johnson
Professor and Head
116 Animal Sciences Laboratory
1207 W. Gregory Drive
Urbana, IL 61801

Dear Rod

Thanks for sharing with us the exciting Master of Animal Sciences program that the Department of Animal Sciences offers, in addition to the traditional Master of Science and Doctor of Philosophy degrees in Animal Sciences. Our programs have a history of offering our in-person and online courses to students in both departments and look forward to extending this offer to your students in the Master of Animal Sciences program.

Sincerely,

Sean Fox,
Professor & Head, Dept. of Agricultural and Consumer Economics