COMPUTER SCIENCE + ANIMAL SCIENCES, BS & ANIMAL SCIENCE, MANSC

for the degree of Bachelor of Science in Computer Science + Animal Sciences and the Master of Animal Sciences in Animal Science

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The joint BS (CS+ANSC)/MANSC program integrates a baccalaureate degree (BS) preparation in Computer Sciences and Animal Sciences (CS+ANSC) with a non-thesis Master of Animal Sciences (MANSC) preparation. Students enrolled in the BS (CS+ANSC) 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 (CS+ANSC) degree (including a minimum of 40 credit hours in upper-division 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. Email ansc-gradprog@illinois.edu if you have questions about this program.

for the degree of Bachelor of Science in Computer Science + Animal Sciences and the Master of Animal Sciences in Animal Science

for the Degree of Bachelor of Science Major in Computer Science & Animal Sciences

Code	Title	Hours
Composition and Speech (choose 1 from):		**6-7**
RHET 105 & CMN 101	Writing and Research and Public Speaking	
CMN 111 & CMN 112	Oral & Written Comm I and Oral & Written Comm II	
Advanced Composition (students select from Gen Ed List)		**3-4**
Cultural Studies		
Western Culture (students select from Gen Ed List)		
Non-Western Culture (students select from Gen Ed List)		
US Minority Culture (students select from Gen Ed List)		
Language other than English (at or above 3rd level)		
Natural Sciences and Technology		**8**
CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	
Humanities and the Arts (students select from Gen Ed List)		**6**
Social and Behavioral Sciences		**6-7**
ECON 102 or ACE 100	Microeconomic Principles or Introduction to Applied Microeconomics	
Students choice from Gen Ed List		
Mathematical Foundations (fulfills Quantitative Reasoning I & II)		
CS 361	Probability & Statistics for Computer Science	
MATH 220 or MATH 221	Calculus Calculus I	
MATH 225	Introductory Matrix Theory	
MATH 231	Calculus II	
Computer Sciences Core		
CS 100	Computer Science Orientation	
CS 125	Introduction to Computer Science	
CS 126	Software Design Studio	
CS 173	Discrete Structures	
CS 225	Data Structures	
CS 374	Introduction to Algorithms & Models of Computation	
CS 357 or CS 421	Numerical Methods I Programming Languages & Compilers	
Computer Science Technical Track (two options)		
CS 233 & CS 241	Computer Architecture and	
OR		
CS 240 & Two CS 400	Any two (2) 400-level CS courses except CS 491	
Animal Sciences Core		
ANSC 100	Intro to Animal Sciences	
ANSC 221	Cells, Metabolism and Genetics	
ANSC 222	Anatomy and Physiology	
ANSC 223	Animal Nutrition	
ANSC 224	Animal Reproduction and Growth	
ANSC 398	UG Experiential Learning	
ANSC 498	Integrating Animal Sciences	
Applied Animal Sciences Courses (choose 3)		**9**
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		
ANSC 250	Companion Animals in Society	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
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	

Information listed in this catalog is current as of 04/2024

ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 405		
ANSC 407	Animal Shelter Management	
ANSC 424	Pet Food & Feed Manufacturing	
ANSC 435	Milk Quality and Udder Health	
ANSC 437		
ANSC 471	ANSC Leaders & Entrepreneurs	
Basic Animal Sciences Courses (choose 3)		**9**
ANSC 251	Epidemics and Infectious Diseases	
ANSC 306	Equine Science	
ANSC 331		
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		
ANSC 448		
ANSC 449	Biological Modeling	
ANSC 450	Comparative Immunobiology	
ANSC 451	Microbes and the Anim Indust	
ANSC 452	Animal Growth and Development	
ANSC 453		
ANSC 467	Applied Animal Ecology	
ANSC 509	Muscle Biology	
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		
ANSC 561		
Total Hours		**126**

Other Requirements

Requirement

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

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]	3-4
or ANSC 445	Statistical Methods	
or ANSC 448		
or ANSC 449	Biological Modeling	
Elective 400- or 500-level ANSC courses	(excludes ANSC 590, ANSC 591, ANSC 593) [2]	18 to 19
ANSC 593	Res Studies in Animal Sciences [3]	8
Total Hours		**32**

Other Requirements

Requirement

Other Requirements and conditions may overlap

Minimum Hours Overall Required Within the Unit: 12

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

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.

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Sample Sequence

This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a third level of a language other than English. This sample curriculum plan makes the assumption that the foreign language graduation requirement has been satisfied by completing three years of study

of a single foreign language in high school. For more information, see the corresponding section on the Degree and General Education Requirements page *(http://catalog.illinois.edu/general-information/degree-general-education-requirements/).*

First Year

First Semester	Hours	Second Semester	Hours
CS 124	3	CS 128	3
CS 100	1	CS 173	3
MATH 220	5	MATH 231	3
CMN 101 or RHET 105	3	CHEM 102	3
ANSC 100	4	CHEM 103	1
		RHET 105 or CMN 101	4
	16		**17**

Second Year

First Semester	Hours	Second Semester	Hours
CS 225	4	Free elective course	3
CS 222	1	ANSC 223	3
CHEM 104	3	CS 340	3
CHEM 105	1	ANSC 224	4
ANSC 221	3	Applied Animal Science course	3
ANSC 222	3		
ANSC 398	1		
	16		**16**

Third Year

First Semester	Hours	Second Semester	Hours
MATH 257	3	CS 374	4
Basic Animal Science Course	3	CS 361	3
Applied Animal Science course	3	CS 4XX	3
General Education course	3	General Education course	3
CS 4XX	4	General Education course	3
	16		**16**

Fourth Year

First Semester	Hours	Second Semester	Hours
CS 357 or 421	3	ANSC 498	2
Basic Animal Science course	3	General Education course	3
Applied Animal Science course	3	General Education course	3
General Education course	3	Basic Animal Science course	3
General Education course	3	ECON 102 or ACE 100	3-4
	15		**14**

Fifth Year

First Semester	Hours	Second Semester	Hours
ANSC 590 or 591	2	ANSC 593	4
ANSC 593	4	ANSC 400-500 Elective course	4
Applied Statistical Methods course	4	ANSC 400-500 Elective course	4
ANSC 400-500 Elective course	4	ANSC 400-500 Elective course	4
ANSC 400-500 Elective course	2		
	16		**16**

Total Hours 158

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Animal Sciences
Animal Sciences website (https://ansc.illinois.edu/)
Animal Sciences Laboratory, 1207 West Gregory Drive, Urbana, IL 61801
(217) 333-3131
Animal Sciences Graduate email (ansc-gradprog@illinois.edu)

College of Agricultural, Consumer & Environmental Sciences
College of Agricultural, Consumer & Environmental Sciences website (https://aces.illinois.edu/)

ACES Office of Academic Programs
128 Mumford Hall, 1301 West Gregory Drive, Urbana, IL 61801

Graduate Advising
Animal Sciences Graduate Advising email (ansc-gradprog@illinois.edu)

Undergraduate Advising
(217) 333-3570
Undergraduate Advising email (anscadvising@illinois.edu)
Advising website (https://ansc.illinois.edu/about/contact-us/#paragraph--499)

Admissions
ACES Undergraduate Admissions (https://aces.illinois.edu/admissions/)
Visit ACES email (visitACES@illinois.edu)
(217) 333-3380
University of Illinois Undergrad Admissions (https://www.admissions.illinois.edu/)

Computer Science
Computer Science degree information (https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs/#requirements)
CS + Crop Science website (https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs/computer-science-crop-sciences/)
Computer Science website (https://cs.illinois.edu/about/people/department-faculty/)
Computer Science faculty (https://cs.illinois.edu/about/people/department-faculty/)
Computer Science email (undergrad@cs.illinois.edu)

The Grainger College of Engineering Admissions (https://grainger.illinois.edu/)
The Grainger College of Engineering