DAIRY AND FOOD ANIMAL MANAGEMENT, BS

Studying the business of animal agriculture and the biology and management of farm animals can lead to improvements in our food production systems that will benefit animals, farmers, consumers, and the environment. Students in the Dairy and Food Animal Management major learn these principles while embracing innovation and technology to meet the needs of today's dairy, livestock, poultry, and meat industries. The Department of Animal and Dairy Sciences, home of the undergraduate program in dairy and food animal management, produces skilled leaders who integrate management challenges associated with animal health and welfare, land and water stewardship, precision livestock farming, food safety, and sustainable global agriculture.

A 10:1 student-faculty ratio and small classes allow for meaningful connections. Out-of-classroom learning opportunities, such as internships on farms or with agribusiness, and management experiences associated with meat processing give students the training they need for successful 21st-century careers. Students can also gain valuable experience working in research labs, department dairy and livestock operations, as well as the meat processing and retail facilities.

Students majoring in Dairy and Food Animal Management are working toward a variety of careers that require a strong background in agribusiness, animal biology, farm management, livestock production management, meat industry, technical services and consulting, research, and outreach.

LEARN THROUGH HANDS-ON, REAL-WORLD EXPERIENCES

UW-Madison has farm animals on campus. Animal facilities are located near classrooms giving students easy access to livestock and poultry during lab sessions. Animal agriculture is not just about managing animals-it is about business economics and global food systems. Out-of-the classroom experiences are the norm for Dairy and Food Animal Management students, with **100 percent** of students completing an internship or field experience.

Hands-on courses include reproduction, animal nutrition and genetics, dairy herd management, lactation physiology, meat science, and processing. Students solve problems through field trips, involvement on farms, and processing facilities.

BUILD COMMUNITY AND NETWORKS

Madison is an ideal location for the study of dairy and food animal management. It is a vibrant city-home to many large agribusinesses-located close to dairy & livestock farms and meat markets. Students volunteer in a variety of activities when involved with clubs and organizations; making connections and networking with industry partners via events such as World Dairy Expo directed by the Badger Dairy Club (https://win.wisc.edu/organization/badgerdairyclub/) and the Lamb Show directed by the Saddle & Sirloin Club (https://win.wisc.edu/organization/saddleandsirloin/).

CUSTOMIZE A PATH OF STUDY

Dairy and Food Animal Management students can customize their coursework to fit their career goals with a large variety of animal classes in combination with courses taught by Agricultural & Applied Economics. The major can by combined with other majors such as Life Sciences Communication and Agronomy or certificates such as computer sciences, food systems, environmental studies, and global health.

MAKE A STRONG START

Students can take an introductory seminar course that helps them develop an individualized four-year course plan, learn about internships and job opportunities, and discuss leadership development opportunities.

GAIN GLOBAL PERSPECTIVE

Dairy and Food Animal Management majors are encouraged to go on study abroad programs, where they can immerse themselves in international animal production coursework, research, or field experiences. Many students have completed a semester abroad in The Netherlands. Additional CALS Study Abroad collaborations include Dublin, Ireland, Greece, and New Zealand undergraduate programs. Students work with their advisor and the CALS study abroad office (https://cals.wisc.edu/academics/undergraduate-students/studyabroad/) to identify appropriate programs.

HOW TO GET IN

HOW TO GET IN

To declare this major, students must be admitted to UW–Madison and the College of Agricultural and Life Sciences (CALS). For information about becoming a CALS first-year or transfer student, see Entering the College (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#enteringthecollegetext).

Students who attend Student Orientation, Advising, and Registration (SOAR) with the College of Agricultural and Life Sciences have the option to declare this major at SOAR. Students may otherwise declare after they have begun their undergraduate studies. For more information, contact the advisor listed in the Contact Box for the major.

REQUIREMENTS

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (http://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext) section of the *Guide*.

General Education

- Breadth—Humanities/Literature/Arts: 6 credits
- Breadth—Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits
- Breadth—Social Studies: 3 credits
- Communication Part A Part B *
- Ethnic Studies *
- Quantitative Reasoning Part A Part B *

* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES REQUIREMENTS

In addition to the University General Education Requirements, all undergraduate students in CALS must satisfy a set of college and major requirements. Courses may not double count within university requirements (General Education and Breadth) or within college requirements (First-Year Seminar, International Studies, Science, and Capstone), but courses counted toward university requirements may also be used to satisfy a college and/or a major requirement; similarly, courses counted toward college requirements may also be used to satisfy a university and/or a major requirement.

COLLEGE REQUIREMENTS FOR ALL CALS BS DEGREE PROGRAMS

Code	Title	Credits
Quality of Work: Students must maintain a minimum cumulative grade point average of 2.000 to remain in good standing and be eligible for graduation.		
Residency: Students must complete 30 degree credits in residence at UW–Madison after earning 86 credits toward their undergraduate degree.		
First year seminar (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSFirstYearSeminarCourses)		1
International studies (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSInternationalStudiesCourses)		3
Physical science fundamentals		4-5
CHEM 103	General Chemistry I	
or CHEM 108	Chemistry in Our World	
or CHEM 109	Advanced General Chemistry	
Biological science		5
Additional science (biological, physical, or natural)		3
Science breadth (biological, physical, natural, or social)		3
CALS Capstone Learning Experience: included in the requirements for each CALS major (see "major requirements") (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSCapstoneRequirement)		

SUMMARY OF MAJOR REQUIREMENTS

Code	Title	Credits
Major Requirements		
Foundation		19-25
Major Core		8
Major Depth and Breadth		36
Internship		1
Major Capstone		2-3
Total Credits		**66-73**

DAIRY & FOOD ANIMAL MANAGEMENT MAJOR REQUIREMENTS

Code	Title	Credits
Foundation		
Mathematics		
Complete one of the following (or may be satisfied by placement exam):		3-5
MATH 112	Algebra	
MATH 114	Algebra and Trigonometry	
Statistics		
STAT 301	Introduction to Statistical Methods	3
or STAT 371	Introductory Applied Statistics for the Life Sciences	
Chemistry		*5-9*
Complete one of the following:		
CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	
CHEM 109	Advanced General Chemistry	
Biology		*5*
Complete one of the following:		
BIOLOGY/BOTANY/ZOOLOGY 151	Introductory Biology	
BIOLOGY/ZOOLOGY 101 & BIOLOGY/ZOOLOGY 102	Animal Biology and Animal Biology Laboratory	
Biochemistry		*3*
BIOCHEM 301	Survey of Biochemistry	
or BIOCHEM 501	Introduction to Biochemistry	
Major Core		
AN SCI/DY SCI 101	Introduction to Animal Sciences	3
AN SCI/DY SCI 102	Introduction to Animal Sciences Laboratory	1
A A E 101	Introduction to Agricultural and Applied Economics	4
or ECON 101	Principles of Microeconomics	
Major Depth and Breadth		
Animal Science		*12*
Complete 12 credits from the following:		

AN SCI 245	Animal Welfare
AN SCI/DY SCI/ NUTR SCI 311	Comparative Animal Nutrition
AN SCI/ DY SCI 320	Animal Health and Disease
AN SCI 336	Animal Growth and Development
AN SCI/ DY SCI 361	Introduction to Animal and Veterinary Genetics
AN SCI/ DY SCI 363	Principles of Animal Breeding
AN SCI 366	Concepts in Genomics
AN SCI/ DY SCI 373	Animal Physiology
AN SCI/ DY SCI 414	Ruminant Nutrition & Metabolism
AN SCI 415	Application of Monogastric Nutrition Principles
AN SCI/ DY SCI 434	Reproductive Physiology
DY SCI 378	Lactation Physiology
Food and Animal Agriculture	*12*
Complete 12 credits from the following:	
AN SCI/ FOOD SCI 305	Introduction to Meat Science and Technology
AN SCI/ FOOD SCI 321	Food Laws and Regulations
AN SCI/BSE 344	Digital Technologies for Animal Monitoring
AN SCI/ DY SCI 370	Livestock Production and Health in Agricultural Development
AN SCI 420	Microbiomes of Animal Systems
AN SCI 431	Beef Cattle Production
AN SCI 432	Swine Production
DY SCI/ AGRONOMY 471	Food Production Systems and Sustainability
AN SCI/ FOOD SCI 515	Commercial Meat Processing
DY SCI 233	Dairy Herd Management I
DY SCI 234	Dairy Herd Management II
DY SCI 534	Reproductive Management of Dairy Cattle
AGRONOMY 302	Forage Management and Utilization
FOOD SCI 301	Introduction to the Science and Technology of Food
SOIL SCI/ ENVIR ST/ GEOG 230	Soil: Ecosystem and Resource
or SOIL SCI 301	General Soil Science
Business, Economics, and Management	*12*
Complete the following two courses:	
A A E 320	Agricultural Systems Management
A A E 419	Agricultural Finance
Complete 6 credits from the following:	
A A E 322	Commodity Markets
A A E 335	Introduction to Data Analysis using Spreadsheets
A A E/ECON 421	Economic Decision Analysis
A A E 422	Food Systems and Supply Chains
ACCT I S 300	Accounting Principles
GEN BUS 301	Business Law
MARKETNG 300	Marketing Management
M H R 300	Managing Organizations
M H R 305	Human Resource Management
Internship	**1**
Complete the following course:	
AN SCI 399	Coordinative Internship/ Cooperative Education
Capstone	**2-3**
Complete one of the following:	
AN SCI 435	Animal Sciences Proseminar
DY SCI 535	Dairy Farm Management Practicum
Total Credits	**66-73**

UNIVERSITY DEGREE REQUIREMENTS

Total Degree	To receive a bachelor's degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.
Residency	Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.
Quality of Work	Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.

LEARNING OUTCOMES

LEARNING OUTCOMES

1. Describe biological principles and their application within dairy and food animal production systems
2. Explain business, management, and economic principles and their application to dairy and food animal production systems
3. Apply scientific principles and critical thinking skills to identify and solve real-world problems facing dairy and food animal production enterprises
4. Demonstrate the scientific, managerial, and communication competencies needed for advanced careers in dairy and food animal management

FOUR-YEAR PLAN

FOUR-YEAR PLAN

This sample four-year plan is a tool to assist students and their advisors. Students should use their DARS Report, the Degree Planner, Guide Requirements, and the Course Search & Enroll tools to make their own four-year plan based on their placement scores, credit for transferred courses and approved examinations, and individual interests.

SAMPLE DAIRY AND FOOD ANIMAL MANAGEMENT FOUR-YEAR PLANS

Dairy Focus

First Year

Fall	Credits	Spring	Credits
AN SCI/DY SCI 101	3	CHEM 103	4
AN SCI/DY SCI 102	1	A A E 101	4
AN SCI 135 (CALS First Year Seminar)	1	Elective	3
MATH 112	3	Communications B	3
General Education	3		
Communications A	3		
	14		**14**

Second Year

Fall	Credits	Spring	Credits
CHEM 104	5	BIOLOGY/ ZOOLOGY 101	3
STAT 301	3	BIOLOGY/ ZOOLOGY 102	2
General Education	3	BIOCHEM 301	3
Major Depth and Breadth - Food and Animal Agriculture	3	General Education	3
		Major Depth and Breadth - Food and Animal Agriculture	3
		Elective	2
	14		**16**

Third Year

Fall	Credits	Spring	Credits
Major Depth and Breadth - Animal Science	3	Major Depth and Breadth - Food and Animal Agriculture	3
Major Depth and Breadth - Business, Economics, and Managment	3	Major Depth and Breadth - Business, Economics, and Management	3
CALS International Studies	3	Major Depth and Breadth - Animal Science	3-4
General Education	3	Electives	6
Elective or Internship	1-3		
	13-15		**15-16**

Fourth Year

Fall	Credits	Spring	Credits
Capstone	2-3	Major Depth and Breadth - Business, Economics, and Management	3
Major Depth and Breadth - Food and Animal Agriculture	3	Major Depth and Breadth - Animal Science	3
Major Depth and Breadth - Business, Economics, and Management	3	Electives	10
Major Depth and Breadth - Animal Science	3		
Electives	3		
	14-15		**16**

Total Credits 116-120

Food Animal/Meat Focus

First Year

Fall	Credits	Spring	Credits
AN SCI/DY SCI 101	3	CHEM 103	4
AN SCI/DY SCI 102	1	A A E 101 (General Education - Social Science)	4
AN SCI 135 (CALS First Year Seminar)	1	Elective	3
MATH 112	3	Communications B	3
General Education	3		
Communications A	3		
	14		**14**

Second Year

Fall	Credits	Spring	Credits
CHEM 104	5	BIOLOGY/ ZOOLOGY 101	3
STAT 301	3	BIOLOGY/ ZOOLOGY 102	2
General Education	3	BIOCHEM 301	3
Major Depth and Breadth - Animal Science	3	General Education	3
		Major Depth and Breadth - Animal Science	3
		Elective	2
	14		**16**

Third Year

Fall	Credits	Spring	Credits
Major Depth and Breadth - Food and Animal Agriculture	3	Major Depth and Breadth - Food and Animal Agriculture	3
Major Depth and Breadth - Business, Economics, and Managment	3	Major Depth and Breadth - Business, Economics, and Management	3
CALS International Studies	3	Major Depth and Breadth - Animal Science	3-4
General Education	3	Electives	6

Elective or Internship	1-3		
	13-15		**15-16**
Fourth Year			
Fall	**Credits**	**Spring**	**Credits**
Capstone	2-3	Major Depth and Breadth - Business, Economics, and Management	3
Major Depth and Breadth - Food and Animal Agriculture	3	Major Depth and Breadth - Food and Animal Agriculture	3
Major Depth and Breadth - Business, Economics, and Management	3	Electives	10
Major Depth and Breadth - Animal Science	3		
Electives	3		
	14-15		**16**

Total Credits 116-120

ADVISING AND CAREERS

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ADVISING

Each Dairy and Food Animal Management major receives one-on-one guidance from their academic advisor. Academic advisors will help students build an individualized curriculum four-year plan, explore and identify experiences to meet career goals and deepen their educational program.

CAREER OPPORTUNITIES

As students find their career interests, faculty working in those fields serve as career mentors to help students make progress toward their goals.

Undergraduates in Dairy and Food Animal Management prepare for a variety of career opportunities. Animal agriculture career opportunities include animal nutrition and consulting, animal breeding & genetics, herd management, information technology, product development, quality control, food testing and Agriculture business.

Dairy and Food Animal Management graduates are in high demand by employers and receive job offers with competitive salaries.

PEOPLE

PEOPLE

PROFESSORS

Weigel, Kent (Chair)
Khatib, Hasan (Associate Chair)
Adcock, Sarah
Arriola Apelo, Sebastian
Cabrera, Victor
Claus, Jim
Crenshaw, Thomas
Dorea, Joao
Ferraretto, Luiz
Fricke, Paul
Gragg, Sara
Guo, Wei
Hernandez, Laura
Kirkpatrick, Brian
Laporta, Jimena
Leone, Vanessa
Mantovani, Hilario
Nicholson, Chuck
Ortega, Sofia
Parrish, John
Peñagaricano, Francisco
Reed, Jess
Richards, Mark
Ricke, Steve
Rosa, Guilherme
Rostoll - Cangiano, Lautaro
Shanmuganayagam, Dhanansayan (Dhanu)
Sindelar, Jeffrey
Van Os, Jennifer
Wattiaux, Michel
White, Heather
Wiltbank, Milo

INSTRUCTORS/LECTURERS

Kean, Ron
O'Rourke, Bernadette
Ronk, Eric

UNDERGRADUATE ADVISOR

Sandberg, Liv

See also: https://andysci.wisc.edu/about-us/faculty-and-staff/

WISCONSIN EXPERIENCE

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INTERNSHIPS

In the Dairy and Food Animal Management program, 100 percent of students complete an internship or field experience. Students will work with their faculty mentor to explore internship opportunities and establish goals.

UW-Madison's proximity to farms, agribusinesses, and events such as Dairy Expo provide undergraduates with unique internships and valuable hands-on learning. Students can be directly involved with meat processing and sales at Bucky's Varsity Meats, providing real life experiences.

Internship opportunities from industry collaborators are dispersed to students via department communications.

RESEARCH EXPERIENCE

Many students complete a research project under mentorship from a faculty member. Animal and Dairy science faculty are internationally recognized specialists in nutrition, genetics, lactation, reproduction, animal welfare, herd management, and more. Students can take on research projects with faculty members for either course credit or pay, depending on the opportunity.

STUDENT ORGANIZATIONS

The Badger Dairy Club (https://win.wisc.edu/organization/badgerdairyclub/) is a large, motivated student organization on campus with members from various majors who share a passion for the dairy industry. Highlights of the club's activities include work at the World Dairy Expo and club trips.

The Saddle & Sirloin Club (https://win.wisc.edu/organization/saddleandsirloin/) hosts various livestock shows, such as the Lamb Show.

The Poultry Club (https://www.facebook.com/PoultryClubUWMadison/) and Badger Meat Science Club (https://www.facebook.com/badgermeatscienceclub/) are active department clubs offering students unique opportunities to be involved with events and networking opportunities within their respective industries.

Students in these organizations volunteer and participate in events such as Wisconsin 4-H competitions, FFA Judging Contests, and club trips. These clubs also offer student opportunities to be in leadership positions and develop soft skills.

There are other opportunities for students to get involved in agriculture-related organizations on campus such as Collegiate FFA (http://collegiateffamadison.weebly.com/), Association of Women in Agriculture (http://awamadison.org/), Babcock House (https://win.wisc.edu/organization/babcockhouse/), and Alpha Gamma Rho (https://win.wisc.edu/organization/agr/).

COMPETITIVE TEAMS

Students can join competitive teams that take part in Intercollegiate Dairy Judging (https://andysci.wisc.edu/uw-madison-dairy-judging/), the North American Intercollegiate Dairy Challenge (https://andysci.wisc.edu/national-north-american-intercollegiate-dairy-challenge/), and the Intercollegiate Riding Teams (https://win.wisc.edu/organization/wisconsinequestrianteam/).

GLOBAL ENGAGEMENT

Dairy and Food Animal Management students are encouraged to study abroad. Students can find more information on the International Academic Programs website (https://www.studyabroad.wisc.edu/) and the CALS study abroad advising page (https://cals.wisc.edu/academics/undergraduate-students/international-programs/study-abroad-advising/).

In addition to study abroad programs, the department offers globally focused courses that look at animal agriculture, sustainable development, improvement in developing countries, and the world role of U.S. animal agriculture, and food production related to human and environmental health, land use, and social justice.

COMMUNITY ENGAGEMENT AND VOLUNTEERING

Students volunteer at a number of activities directed by Badger Dairy Club, Saddle & Sirloin, Poultry Club, and the Meat Science Club. Students have the unique opportunity to be directly involved in the working behind the scenes before, during, and after the shows and events.

On campus, the Morgridge Center for Public Service (https://morgridge.wisc.edu/) provides resources to help students connect with volunteer opportunities based on their interests and goals.

RESOURCES AND SCHOLARSHIPS

RESOURCES AND SCHOLARSHIPS

The department offers more than 40 scholarships and awards more than $170,000 annually.

Students across the College of Agricultural & Life Sciences receive more than $1.25 million in scholarships annually. Learn more about college scholarships here (https://cals.wisc.edu/academics/undergraduate-students/financing-your-education/cals-scholarships/).

UW-Madison has specialized facilities offering students hands-on dairy science experiences, including:

- The Dairy Cattle Center (https://andysci.wisc.edu/about-us/facilities/) is home to more than 80 dairy cows on campus in a tie-stall barn.
- The Poultry Research Lab (https://andysci.wisc.edu/about-us/facilities/) is located right on campus, housing chickens and other poultry; offering students part time jobs and involvement with poultry research being conducted by faculty.
- Bucky's Varsity Meats (https://varsitymeats.cals.wisc.edu/) is a student driven retail store selling a variety of meats and meat products. Students can find part-time work and experience in a wide range of meat marketing jobs.
- The Livestock Laboratory (https://andysci.wisc.edu/about-us/facilities/) houses a variety of livestock being used for classes or research in which students' opportunities to gain hands-on handling skills for part-time jobs.
- A network of off-campus Agricultural Research Stations (https://ars.wisc.edu/) serve as living laboratories for livestock research to enhance research taking place on campus.
- The Babcock Dairy Plant (https://babcockhalldairyplant.wisc.edu/) is a fully operational dairy plant with a retail store selling dairy products. Students can find part-time work and experience in a wide range of dairy processing jobs.