

# DAIRY SCIENCE, MS

The Animal and Dairy Sciences Department offers one of the most comprehensive animal and dairy science graduate programs in the country. Faculty interests and research funding span diverse areas of focus, with emphases ranging from *in vivo* and *in vitro* studies probing biological relationships at a fundamental mechanistic level, to bioinformatics and data analytics studying fundamental biology and development of decision support tools for dairy farm management. The common thread through these varied interests is the motivation to address current practical issues in animal agriculture.

Development of an individual course of study is flexible to meet the needs of students with varied interests. Fundamental training in basic science fields related to the area of interest is required. There are nine program areas for prospective applicants to review and choose from – see website (<https://andysci.wisc.edu/>). Minimum admissions requirements of the Graduate School must be met. Specific degree requirements are available from the department.

Graduate students in the department are a mix of domestic students from within and outside of Wisconsin, and international students from multiple countries. This diversity brings a national and global perspective to research, instruction, extension, and cultural understanding. Graduates find employment in academic teaching and research, in professional veterinary or medical degree programs, in industrial research in the food and feed industries, in laboratory research programs with governmental and international agencies, private corporations, and in industrial or institutional management positions requiring a high level of scientific training.

Two paths are available for graduate work leading to the Master of Science degree in Dairy Science. Students who plan to continue for the PhD degree, or who expect to enter fields of work involving research, should take the MS degree with a path in research. Students who wish to obtain more specialized training, but are not planning for a research career, may pursue a degree strictly through course work.

## RESEARCH FOCUS AREAS

Students may choose to focus on the areas of nutrition, rumen microbiology, reproductive physiology– endocrinology, lactational physiology, genetics, animal breeding, animal behavior, muscle biology, meat science, cell biology, animal health, immunity and toxicology, international agriculture or precision agriculture. Considerable opportunity for study exists in joint programs with bacteriology, toxicology, biochemistry, the interdepartmental graduate program in nutritional sciences, genetics, endocrinology, reproductive physiology training program, food science, physiology, agricultural and applied economics, biometry, cellular and molecular biology, pharmaceutical sciences, chemical and biological engineering, bio-engineering, comparative biosciences, and anatomy.