

ANIMAL MOLECULAR AND CELLULAR BIOLOGY

PROGRAM INFORMATION

The animal molecular and cell biology (AMCB) graduate program offers Master of Science and Doctor of Philosophy degrees. Faculty are drawn from these disciplines:

- Animal Sciences
- Biochemistry and Molecular Biology
- Large Animal Clinical Sciences
- Obstetrics and Gynecology
- Zoology

Early in the program, students choose a faculty supervisor who will ensure the quality of their research experience. Students may also do optional rotations through the laboratories of one or more other faculty. The Annual Research Symposium features guest speakers and student research presentations. A weekly journal club and monthly seminars draw on the knowledge and diversity the campus offers in molecular and cell biology.

Core course requirements for the M.S. degree are BCH 5045 Graduate Survey of Biochemistry (4 cr.), registration in a 1-credit graduate seminar course and successful completion of a course on responsible and ethical conduct of research. Core course requirements for the Ph.D. include BCH 5413 Mammalian Molecular Biology and Genetics (3 cr.) and GMS 6421 Cell Biology (4 cr.), registration in two graduate seminar courses and successful completion of a course on responsible and ethical conduct of research.

Contact P.J. Hansen at pjhansen@ufl.edu or visit the program's website at <https://programs.ifas.ufl.edu/animal-molecular-and-cellular-biology/>

Degrees Offered

DEGREES OFFERED WITH A MAJOR IN ANIMAL MOLECULAR AND CELLULAR BIOLOGY

- Doctor of Philosophy
 - no concentration
 - concentration in Domestic Animal Genomics
 - concentration in Reproductive Biotechnology
- Master of Science
 - no concentration
 - concentration in Domestic Animal Genomics
 - concentration in Reproductive Biotechnology

Requirements for these degrees are given in the Graduate Degrees (<http://gradcatalog.ufl.edu/graduate/degrees/>) section of this catalog.

Courses

ANIMAL SCIENCE DEPARTMENT COURSES

Code	Title	Credits
ANS 5446	Animal Nutrition	3
ANS 5935	Reproductive Biology Seminar and Research Studies	1

ANS 6040	Concepts in Applied Ethology	3
ANS 6288	Experimental Techniques and Analytical Procedures in Meat Research	3
ANS 6312C	Applied Ruminant Reproductive Management	4
ANS 6313	Current Concepts in Reproductive Biology	2
ANS 6379L	Techniques Genetics	2
ANS 6387	Genetic Analysis of Complex Traits in Livestock	3
ANS 6447	Ruminant Nutrition	4
ANS 6449	Vitamins	3
ANS 6452	Principles of Forage Quality Evaluation	3
ANS 6458	Advanced Methods in Nutrition Technology	3
ANS 6636	Meat Technology	3
ANS 6637	Quantitative Microbial Risk Assessment of Pathogens in Food Systems	3
ANS 6702	Physiology of the Mammary Gland and Lactation	2
ANS 6704	Mammalian Endocrinology	2
ANS 6705	Muscle Physiology	1
ANS 6707	Growth Physiology in Farm Animals	1
ANS 6711	Current Topics in Equine Nutrition and Exercise Physiology	2
ANS 6714	Current Topics in Microbial Physiology in Animals	1
ANS 6715	Gastrointestinal and Feed Microbiology	3
ANS 6716	Physiology in Farm Animals	1
ANS 6718	Nutritional Physiology of Domestic Animals	2
ANS 6723	Mineral Nutrition and Metabolism	3
ANS 6750	Reproductive Physiology in Farm Animals	1
ANS 6751	Physiology of Reproduction	3
ANS 6767	Advanced Endocrinology	3
ANS 6775	Essentials of Livestock Immunology	1
ANS 6905	Problems in Animal Science	1-4
ANS 6910	Supervised Research	1-5
ANS 6932	Special Topics in Animal Science	1-3
ANS 6933	Graduate Seminar in Animal Science	1
ANS 6936	Graduate Seminar in Animal Molecular and Cell Biology	1-2
ANS 6939	Animal Molecular and Cellular Biology Journal Colloquy	1
ANS 6940	Supervised Teaching	1-5
ANS 6942	Supervised Extension in the Animal Sciences	1-3
ANS 6971	Research for Master's Thesis	1-15
ANS 7979	Advanced Research	1-12
ANS 7980	Research for Doctoral Dissertation	1-15
PCB 6816	Thermal Physiology	1

Student Learning Outcomes

ANIMAL MOLECULAR & CELLULAR BIOLOGY (MS)

SLO 1 Knowledge
Identify, recall, appraise, and interpret the principles of molecular and cellular biology and their application to comparative biology

SLO 2 Skills
Design, conduct and draw sound conclusions on scientific experiments

SLO 3 Professional Behavior
Interact with peers and instructors with honesty, cultural sensitivity and effective communication