



# New Mexico State University

## Department of Animal and Range Sciences


### **Requirements for a Master of Agriculture (Concentration in Domestic Animal Biology) in Animal Science**


The Department of Animal and Range Sciences at New Mexico State University offers a non-thesis coursework Master of Agriculture degree with a Concentration in Domestic Animal Biology (MAG-DAB) which provides students with graduate training in animal nutrition and physiology. The degree is earned after satisfactory completion of 32 credit hours of upper division and graduate-level courses. The curriculum is completed in two or three academic semesters and includes a creative component which can be met in several ways.

Students having an undergraduate degree in an area of agriculture or a related field may consider the MAG-DAB as an alternative to a Master of Science which traditionally involves preparation of a thesis. Students who may benefit from this program include those in need of additional advanced science-based coursework in preparation for applying to a professional program in veterinary medicine. Other individuals may be interested in careers in the cooperative extension service, education, or the feed and pharmaceutical industries where an advanced degree may be of benefit to advancement. The curriculum outlined below will assist students in preparing for a number of career opportunities.

### **ADMISSION TO THE PROGRAM**

The MAG-DAB program is administered through the Department of Animal and Range Sciences and is coordinated by the Animal Science Graduate Committee. Admission to the program requires acceptance by the NMSU Graduate School as well as the Department of Animal and Range Sciences. Basic requirements include an undergraduate degree in an agricultural or a related major from an accredited college or university and an undergraduate GPA of 3.0. Depending on undergraduate training, some individuals may need to complete deficiency classes. In addition, the graduate school may require international students to complete one or more English language courses. Applications to the Department should include three letters of reference, a resume, and a statement of interest in advanced graduate training. **Students participating in the MAG Program are not eligible for a graduate assistantship.**





Once admitted to the program, each student will work with an advisor to develop a course work plan of study. The advisor and the student will also select an advisory committee consisting of two departmental faculty members and a third member from outside the department who will normally serve as the Dean's representative to the committee.

Inquiries about the MAG-DAB Program should be directed to the Chair of the Animal Science Graduate Committee.


## **Specific Admission Requirements**

- A. GPA of 3.0 or greater.
- B. Three letters of recommendation.
- C. Completion of the form, "Application for Graduate Admission in Animal Science" including a brief letter (personal statement) outlining the student's background, career goals, and research interest.
- D. Resume
- E. Favorable evaluation for admission will be by consensus of the Animal Science Graduate Committee.
- F. A requirement for admission as a MAG graduate student in the department is completion of a curriculum substantially equivalent to that required of undergraduate animal science students. Therefore, deficiency courses may be required after admission to the program, as determined initially by the Animal Science Graduate Committee.

## **COURSE REQUIREMENTS**

### **CORE COURSES**

**Students in the MAG-DAB Program will complete the following classes:**

- AnSc 480 - Environmental Physiology of Domestic Animals - 3 credits
  - AnSc 501 - Advanced Animal Nutrition - 3 credits
  - AnSc 509 - Endocrinology of Domestic Animals - 3 credits
  - AnSc 512 - Experimental Methods in Animal Science - 4 credits
  - AnSc 522 – Animal Nutrition or AnSc 484 - Ruminant Nutrition - 3 credits
  - AnSc 515 - Graduate Seminar - 1 credit
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## **ELECTIVE COURSES**

**In consultation with their graduate advisor, students choose at least 12 credits from the following list of courses (other classes may be considered on an individual basis):**

AnSc 462 - Parasitology - 3 credits  
AnSc 504 - Animal Physiology Techniques - 4 credits  
AnSc 507 - Lab Techniques in Nutrition - 4 credits  
AnSc 520 - Feedlot Nutrition - 3 credits  
AnSc 521 - Cow/Calf Nutrition - 3 credits  
AnSc 560 - Rumen Microbiology - 3 credits  
AnSc 602 - Advanced Reproductive Physiology - 3 credits  
AnSc 603 - Cardiovascular and Neural Physiology - 3 credits  
AnSc 604, 605, 606 – Advanced Reproductive Endocrinology – 3 credits  
AnSc 621 - Metabolic Functions and Dysfunctions 3 credits

## **CREATIVE COMPONENT**

The creative component of the program involves completing at least two credits of AnSc 598 (Special Research Programs). This requirement can be met in one of two ways. In consultation with the advisor, the student can select a topic of importance in domestic animal biology and prepare a comprehensive literature review covering that topic. An alternative way to meet this requirement is for the student, in consultation with the advisor, to conduct a research project and prepare a written manuscript for evaluation by the advisory committee. In either case, the student will present results of the project in the graduate seminar (AnSc 515) and then be examined by the advisory committee. In certain cases, the student may request approval from the Advisory Committee to complete two additional graduate courses (at least six credits) in lieu of one of the reports described above. If this approach is approved, the oral examination at the end of the program will cover all the courses completed during the MAG-DAB Program. Students pursuing this option must also prepare and present a topical seminar in AnSc 515 at some time during the program.





## **The Master of Agriculture Advisory Committee**

The MAG Advisory Committee is appointed by the student's advisor with approval of the Department Head and consists of four members including three from the animal science area and one representative from the Graduate School.

## **The Master of Agriculture Final Examination**

The MAG Final Oral Examination is primarily concerned with the creative component completed by the student but it may also extend over the entire discipline. Candidates for a MAG Degree are expected to demonstrate a thorough understanding of their creative component including how it was conducted, the results that were found, and what the results mean. They should also demonstrate knowledge of the general discipline of Animal Science.

