

# AGRICULTURE (DOMESTIC ANIMAL BIOLOGY) - MASTER OF AGRICULTURE

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.

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.

For the Master of Agriculture with a concentration in Domestic Animal Biology, students must complete 32 credit hours of graduate courses which include 2 credits of ANSC 598 Special Research Programs for the creative component.

Prefix	Title	Credits
<b>All students in the MAG-DAB Program will complete the following classes:</b>		
ANSC 484	Ruminant Nutrition	3
ANSC 501	Advanced Animal Nutrition	3
ANSC 509	Endocrinology of Domestic Animals	3

ANSC 512	Research Methods in Animal Science	4
ANSC 515	Graduate Seminar <sup>1</sup>	1
ANSC 580	Environmental Physiology of Domestic Animals	3

<i>Elective Courses</i>		
In consultation with their graduate advisor, students choose at least 12 credits from the following list of core courses (other classes may be considered on an individual basis):		12
ANSC 462	Parasitology	
ANSC 507	Laboratory Techniques in Nutrition	
ANSC 520	Advanced Nutritional Management I: Feedlot	
ANSC 521	Advanced Nutritional Management II: Cow Calf/Stocker	
ANSC 560	Rumen Microbiology	
ANSC 602	Advanced Reproductive Physiology	
ANSC 604	Hypothalamo-Hypophyseal-Pineal Endocrinology	
ANSC 605	Gonadal and Uterine Endocrinology	
ANSC 606	Endocrinology of Pregnancy, Parturition, and Lactation	
ANSC 621	Metabolic Functions and Dysfunctions	

<sup>1</sup> must take two semesters of seminar

## 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.

<b>First Year</b>		
<b>Fall</b>		<b>Credits</b>
ANSC 484	Ruminant Nutrition	3
ANSC 580	Environmental Physiology of Domestic Animals	3
Choose 3 credits from elective list:		3
ANSC 602	Advanced Reproductive Physiology	
ANSC 604	Hypothalamo-Hypophyseal-Pineal Endocrinology	
ANSC 605	Gonadal and Uterine Endocrinology	
ANSC 606	Endocrinology of Pregnancy, Parturition, and Lactation	
ANSC 621	Metabolic Functions and Dysfunctions	
		<b>Credits</b>
		<b>9</b>
<b>Spring</b>		
ANSC 501	Advanced Animal Nutrition	3

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ANSC 509	Endocrinology of Domestic Animals	3
Choose 1 of the following electives		3
ANSC 520	Advanced Nutritional Management I: Feedlot	
ANSC 521	Advanced Nutritional Management II: Cow Calf/Stocker	
ANSC 560	Rumen Microbiology	
<b>Credits</b>		<b>9</b>
<b>Second Year</b>		
<b>Fall</b>		
ANSC 515	Graduate Seminar	1
ANSC 598	Special Research Programs	1-4
Choose 6 credits from elective list:		6
ANSC 602	Advanced Reproductive Physiology	
ANSC 604	Hypothalamo-Hypophyseal-Pineal Endocrinology	
ANSC 605	Gonadal and Uterine Endocrinology	
ANSC 606	Endocrinology of Pregnancy, Parturition, and Lactation	
ANSC 621	Metabolic Functions and Dysfunctions	
<b>Credits</b>		<b>8-11</b>
<b>Spring</b>		
ANSC 512	Research Methods in Animal Science	4
ANSC 598	Special Research Programs	1-4
ANSC 515	Graduate Seminar	1
Choose 1 of the following electives		3
ANSC 520	Advanced Nutritional Management I: Feedlot	
ANSC 521	Advanced Nutritional Management II: Cow Calf/Stocker	
ANSC 560	Rumen Microbiology	
<b>Credits</b>		<b>9-12</b>
<b>Total Credits</b>		<b>35-41</b>

### MAP Requirements

- The Graduate School allows qualified junior or senior students to substitute its graduate courses for required or elective courses in an undergraduate degree program and then subsequently count those same course as fulfilling graduate requirements in a related graduate program.
- Undergraduate students may apply for acceptance to the accelerated master's program after completing 60 semester hours of undergraduate coursework of which a minimum of 25 semester credit hours must be completed at NMSU.
- The grade point average must be at a minimum of 3.0.
- Students may take 12 credits from the following courses
- Students must receive a grade of B or higher in this coursework to be counted for graduate credit.

Prefix	Title	Credits
ANSC 480	Environmental Physiology of Domestic Animals	3
ANSC 484	Ruminant Nutrition	3
ANSC 501	Advanced Animal Nutrition	3
ANSC 509	Endocrinology of Domestic Animals	3
ANSC 522	Animal Nutrition	3