

ANIMAL SCIENCE 067 UNDERGRADUATE CURRICULUM NEWSLETTER

October 30, 2009

TO: Students/Faculty
FROM: Dr. Daniela Sharma, Undergraduate Program Director
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Department website: <http://animalsciences.rutgers.edu/>

INFORMATION YOU NEED

<http://animalscience.rutgers.edu/undergraduate/ug-curriculum.html>

This newsletter and the above Animal Science web site contains the latest information concerning registration, 067 course offerings, 067 course synopses, recommended sequence of courses, and an archive of previous curriculum newsletters. Use this information in conjunction with your advisor to develop your program and achieve your career goal.

MAKE SURE YOU ARE CLEARED TO WORK WITH ANIMALS!

Animal Practicum, Animal Handling, Fitting and Exhibition, Research in Animal Science, Animal Nutrition Lab, and Dairy Cattle AI all require work with animals. These courses have animal handling protocols that have been reviewed and approved by the Rutgers University Animal Care and Facilities Committee. A condition of enrollment in these courses is that students complete an Occupational Health Questionnaire and be cleared to work with animals. Clearance may span 1 to 5 years depending on your health. To obtain a health questionnaire, you need to first register at <http://orsp.rutgers.edu/acfc/?csid=156>. After this online registration, you will be emailed a health questionnaire (your name will be typed on the form). Fill out, sign, and submit this form directly to the Occupational Health Department at Hurtado Health Center. The information you provide is kept confidential. Please comply with these regulations for your health and safety.

REGISTRATION FOR SPRING 2010 BEGINS NOV. 8!!

Registration for the Spring 2010 Semester begins on November 8th and continues through November 21st. Students with 105 or more degree credits can register on November 8. To find out when you can register, go to: <http://nbregistrar.rutgers.edu/undergrad/s10prereg.htm>
You should schedule a meeting with your academic advisor prior to registering for classes.

USE DEGREE NAVIGATOR TO PLAN/REVIEW GRADUATION REQUIREMENTS

The Degree Navigator (DN) program (<http://nbdn.rutgers.edu>) lists courses completed by a student. The program also visualizes and records course completion for the college, major (curriculum option), and/or minor requirements. The DN serves as an important advising tool for both student and faculty advisor, and as a record of completion of curriculum requirements. Majors/options declared through the Office of Academic Programs and Research, Room 205, Martin Hall, is programmed in DN. When majors/options are changed, this needs to be processed through Martin Hall. Course substitutions with advisor approval can be submitted on a "Request to Update Individual Program in DN" form to Room 205, Martin Hall. For help/questions contact Dr. Sharma.

PREREQUISITE OVERRIDES

Can't register for a course you want to take? If you haven't yet completed a required course at Rutgers or have not had a transfer course declared equivalent and listed on your transcript, you may be able to obtain a signed prerequisite override form from the instructor. With the form in hand, register in person at Martin Hall (2nd floor).

GENERAL INFORMATION FOR ANIMAL PRACTICUM – Winter/Spring

To register for Animal Practicum, you will need to contact the Farm Staff member and establish course and time requirements. Also, you will need to be cleared to work with animals for this course. Only then will they issue you a special permission number.

Species	Winter	Spring	Farm Staff
Dairy	01	DC	John Bugowski, Dairy Barn, 932-9300
Horse	--	HO	Dr. Sarah Ralston, ralston@aesop.rutgers.edu
Lab Animal	02	LA	Dr. Mehmet Uzumcu, uzumcu@aesop.rutgers.edu
Sheep/Goat	03	SH	Laura Comerford, Farrowing House, 932-9350
Swine	04	SW	Laura Comerford, Farrowing House, 932-9350

Section HO has a prerequisite of Horse Management 11:067:384. Section 02/LA has a prerequisite of Laboratory Animal Sciences: Management and Techniques 11:067:275. A particular Animal Practicum section/species can be taken only once for degree credit. However, more than one section/species can be taken for degree credit. Animal Practicum 200 is offered during the fall and spring semester, the Winter Session, and during the first Summer Session term. Course number 204 is used for the second Summer Session term. Animal Practicum 200 and Animal Practicum 204 are the same course.

SHOW AN ANIMAL ON AG FIELD DAY AND EARN ONE CREDIT

Animal Handling, Fitting, and Exhibition (11:067:175) will be offered between Spring Break and Ag Field Day in cooperation with the Society of Animal Science. Special permission numbers may be obtained for Dairy (DC), Goat (GO), Sheep (SH), and Swine (SW) from Dr. Wohlt (wohlt@aesop.rutgers.edu) and for Horse (HO) from Dr. Ralston (ralston@aesop.rutgers.edu). Students showing Seeing Eye Puppies in the 4-H Dog Show may obtain special permission numbers for section DO from Dr. Jesse (jesse@aesop.rutgers.edu)

2007-2009 NEW BRUNSWICK UNDERGRADUATE CATALOG IS ONLINE

(http://catalogs.rutgers.edu/generated/nb-ug_current/pg21043.html)

Please view/review a description of the Animal Science 067 program; graduation requirements for the major (http://catalogs.rutgers.edu/generated/nb-ug_current/pg23715.html); the minor in Animal Science (http://catalogs.rutgers.edu/generated/nb-ug_current/pg21091.html); the minor in Equine Science (http://catalogs.rutgers.edu/generated/nb-ug_current/pg21098.html); and courses in Animal Science (http://catalogs.rutgers.edu/generated/nb-ug_current/pg21139.html).

NEW COURSE: STUDIES IN ANIMAL SCIENCE 411

This course provides credits for students engaged in educational activities that differ from research activities. There are two sections: SP (Special Projects), and TA (Teaching Assistant). For section SP, by-arrangement credits for faculty-supervised student projects that are not considered research (e.g., literature searches, topic reviews, and written reports). For section TA, the student receives 1.5 credits for teaching assistant-related activities in designated courses (e.g., Animal Nutrition Lab; Student Coordinator/Supervisor for Ag Field Day animal shows). Contact Dr. Daniela Sharma for a special permission number.

ENROLL IN EQUINE LEADERSHIP 11:067:413, 1 CREDIT, WINTER 2010

The Rutgers University Equine Science Center and the New Jersey Agricultural Experiment Station will offer Developing Future Leaders for the Equine Industry during the Winter Session. The course will be held on Tuesday, January 5 and Tuesday, January 12, 2010 from 8:30 am – 4:30 pm at the New Jersey Museum of Agriculture on Cook Campus. The course will be led by Dr. Karyn Malinowski, director of the Equine Science Center and Mary Nikola, Ed. D., director of leadership and organizational development at the New Jersey Agricultural Experiment Station. Topics will

include the value of the equine industry, effective networking and building professional relationships, leadership practices and behaviors, decision-making, economic strategies, and industry management. For more information about the course, please call 732-932-9419 or email Dr. Malinowski at malinowski@njaes.rutgers.edu.

ENROLL IN TECHNIQUES IN EQUINE EXERCISE PHYSIOLOGY 403

Open to students with prior research experience. Taught in a small-group learning format, this course supplements laboratory studies with formal classroom sessions on the scientific method and the theory of various techniques used in equine exercise physiology research. Permission of Dr. McKeever (Bartlett 003, 732-932-9390, mckeever@aesop.rutgers.edu) is required.

CAREER OPPORTUNITIES IN ANIMAL SCIENCE

A broad spectrum of potential employment/career opportunities will be presented through outside speakers in Careers in Animal Sciences (11:067:101). Setting career goals, resume writing, interviewing, and professional development are emphasized. Enrollment of first year students declaring Animal Science as a major is encouraged. For more information, contact Dr. Sharma (sharma@aesop.rutgers.edu).

LEARN ARTIFICIAL INSEMINATION

Dairy Cattle AI (11:067:322) will be offered off campus in cooperation with Precision Diagnostics of New Holland, PA on March 16, 17, 18, 2010 during spring break. Enrollment is limited to seniors and juniors, and registration is for the spring semester. Animal Reproduction (11:067:327) and large animal experience are prerequisites. The AI company charges a fee (~\$200) for the course. Additional costs include transportation and meals. A special permission number may be obtained from Dr. Wohlt.

COMPANION ANIMAL SCIENCE (11:067:250) OFFERED AS AN ELECTIVE

The course, taught in the Spring Semester by Dr. Sharma will provide: a) an understanding and appreciation for the human-animal bond and the responsibilities of animal ownership in current society; b) nature of domestication, anatomy, behavior, physiology, nutrition, health, and diseases of companion animals; and c) opportunities and responsibilities of animal-oriented careers. This course serves as an elective in the 067 curriculum.

ANIMAL PHYSIOLOGY LABORATORY OFFERED AS AN ELECTIVE SPRING 2010

Dr. Advis will offer this laboratory (11:067:301, 1 credit). Animal Physiology 11:067:300 is a pre- or co-requisite. This laboratory is not required but will serve as an elective providing the opportunity for a stronger background and understanding of physiological principles.

ADVANCED EQUINE HEALTH CARE & MANAGEMENT 11:067:398 OFFERED

Dr. Fugaro will teach this course at Rutgers during the Spring 2010 semester. The course will be taught Wednesday nights from 6:00 to 9:00 pm. Enrollment is limited to 20 students from Rutgers. It will be taught at Centenary College during the Spring 2011 semester.

MEDICAL AND VETERINARY ENTOMOLOGY 11:370:406, 3 CREDITS

This new course in Entomology covers insects and other arthropods in relation to human and animal annoyance and disease. This course will satisfy the category "select three from the following" in the Preveter/Research option or serve as an elective.

ENROLL IN LIVESTOCK PRODUCTION & MANAGEMENT 335, 337

This is a required course for Agribusiness and Production and Management specializations in the Animal Industries option, but it also fulfills the experience requirement for the Preveterinary Medicine/Research and Lab Animal Science options. Students wanting to be veterinarians or work

in the pharmaceutical/animal health industries gain valuable knowledge and skills needed for the agricultural/animal industries (dairy, beef, poultry, swine, sheep/goat). Contact Dr. Wohlt for information at wohlt@aesop.rutgers.edu.

EARN CREDITS & EXPERIENCE: STUDENT TO PROFESSIONAL INTERNSHIP NETWORK

The Student to Professional Internship Network (SPIN) affords students the opportunity to gain experience related to their course of study or career interests while earning academic credits to fulfill their SEBS experience-based education requirement. Credits are earned through the completion of academic assignments while the student is engaged in part-time or full-time work experience within business, industry, government or non-profit organizations. Find out more: <http://sebsspin.rutgers.edu/index.html>

2009-2010 INTERNATIONAL SUMMER SCHOLARSHIPS

International Programs at the School of Environmental and Biological Sciences is proud to announce the 2009-2010 International Summer Scholarships. These scholarships are specifically geared towards SEBS students who are interested in enhancing and strengthening their curriculum studies with an international summer learning experience. Students may submit an online application starting December 15, 2009. The last day to apply is February 15, 2010. Contact Monica Emery, at 732-932-8165, x306, Memery@aesop.rutgers.edu

A COLLEGE EDUCATION: WHAT SHOULD IT ENTAIL?

As students embark and complete their undergraduate education certain actions/steps should be taken in consultation with their faculty advisor, including:

- Establish career goals/subject interests
- Major? Double Major? Minors?
 - Start discussion early
 - Address throughout program (Soph, Jr, Sr)
- Complete graduation requirements
 - Courses required
 - Courses of interest
 - Credit load balanced for academic success
- Experience (Application of knowledge, critical thinking, and skills in a subject area)
 - Practicums, Research, Student to Professional Internship Network (SPIN)
 - Meaningful balance of challenging experiences
 - Networking for post graduation success
- Professional Development
 - Northeast Student Affiliate Competition
 - Engage with faculty in research/outreach programs
- Involvement/Contributions (Development/Expression of personal skills: leadership, communication, people etc.)
 - Student Clubs
 - Department/School/RU communities
 - Strengthens resume

Your overall goal should be to optimize your college education for post graduation success.

CONSIDERATIONS FOR PREVETERINARY STUDIES

1. Economic Systems: The Preveterinary Medicine/Research option requires one course: Economics, People and Environment (11:373:101). Consideration should be given to taking the two-semester course sequence as an equivalent: Principles and Applications of Microeconomics

(11:373:121) or Introduction to Microeconomics (01:220:102), and then Principles and Applications of Microeconomics (11:373:121) or Introduction to Macroeconomics (01:220:103). The two-semester course sequence may be a wise choice for you for two reasons: (a) if you switch to the Animal Industry or Laboratory Animal Science option, the two-course sequence is required; and (b) a better business background for Veterinary Medicine is obtained.

2. Second Area VI Course: A number of veterinary colleges require a public speaking course. Thus, consideration should be given to taking Fundamentals of Public Speaking (04:192:220), rather than Scientific and Technical Writing (01:355:302).

WHAT'S AN "OR EQUIVALENT"?

"Or equivalent" is often stated in the catalog and refers to a course similar in content or at a higher level that may substitute for a required course. Many courses that are offered infrequently or have ceased to be offered may require an "or equivalent". Illustrations of "or equivalents" in our curriculum are:

- General Microbiology (11:680:390) for General Microbiology (01:447:390)
- Introduction to Microeconomics (01:220:102) for Principles and Applications of Microeconomics (11:373:121)
- Calculus I (01:640:135) for Precalculus College Mathematics (01:640:115)
- Statistics I (01:960:211) or Introductory Statistics for Business (01:960:285) for Basic Statistics for Economics (01:960:201)
- Extended General Physics (01:750:201, 202) or General Physics (01:750:203, 204, 205, 206) for Physics for the Sciences (01:750:193, 194)

Course substitutes/or equivalents may also apply in Area VI, Oral and Written Communication, Experience-Based Education, 9 credits, and elsewhere in our curriculum. This stresses the need to seek advisory counsel.

PREREQUISITE OVERRIDES

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USE CURRICULUM AND UNSPECIFIED ELECTIVES TO YOUR ADVANTAGE

Each area of specialization in the Animal Industries option and the Laboratory Animal Science option require that 6 credits of electives be completed. For all options, it is also necessary to complete unspecified electives (1-20 credits) to fulfill the graduation requirement of 128 credits. Courses that are selected to complete these credit requirements should reflect your interests and career goals, but you need to have the approval of your faculty advisor. These free electives allow students to complete a minor or even a double major while majoring in Animal Science at New Brunswick. Another opportunity is to participate in the undergraduate student exchange program with Delaware Valley College and Penn State. These schools offer a variety of courses in equine, livestock, or dairy that would also fulfill these free electives and allow you to further develop an area of specialization.

A MINOR MUST BE DECLARED AND APPROVED

For the minor to appear on the transcript and be received, it must be declared and approved. The declaration form is available at the Office of Academic Programs and Research, Room 205, Martin Hall. Courses fulfilling the minor are listed with the signatures of the student and Minor Advisor.

DELAWARE VALLEY COLLEGE/PENN STATE EXCHANGE PROGRAMS

In the Spring 2010 semester it will be possible to take courses at Delaware Valley College or Penn State (see listing below). This program is structured primarily for students in their junior/senior years. Separate formal applications must be made for each exchange. Forms are available from Dr. Wohlt. Acceptance is dependent on academic performance and justification of how the exchange will strengthen/broaden your education and career options. You will formally register for these courses at Rutgers and pay Rutgers tuition and student activity fees. Transportation as well as room and board would be at your cost and paid to the host institution. Complete course descriptions and prerequisites for exchange courses are available through our home page, <http://animalsciences.rutgers.edu/undergraduate/ug-student-exchange.html> Consult with your faculty advisor to determine how participation in these exchange programs can enhance your curriculum and education while completing a degree in Animal Science at Cook College.

DELAWARE VALLEY COLLEGE

(http://delval.edu/cms/index.php/delval/departments_sn/academics/C15/%20)

Spring 2010

- ES 1202 Equine Health Management (3)
- ES 1205 Equestrian Event Management (1)
- ES 3217 Equine Anatomy and Physiology (3)
- ES 4219 Horse Breeding Management (3)
- ES 4222 Equine Business Management (3)
- AS 4027 Sheep Science (3)
- DS 1065 Principles of Dairy Science (3)
- DS 2213 Dairy Cattle Judging (1)
- DS 2230 Physiology of Lactation (3)
- DS 3120 Advanced Selection of Dairy Animals (1)
- DS 3226 Dairy Husbandry Techniques (2)
- DS 4235 Dairy Systems and Management (3)

PENN STATE

(<http://www.das.psu.edu/>)

Spring 2010

- AN SC 310 Dairy Management (3)
- AN SC 311 Poultry Production/Management (3)
- AN SC 424 Livestock Breeding, Evaluation and Selection (3)
- AN SC 410 Advanced Dairy Farm Management (3)
- AN SC 420 Animal Nutrition and Feed Technology (4)
- AGBM 200 Introduction to Agricultural Business Management (3)
- AGBM 407 Farm Planning and Financial Management (3)