Animal Science Summer Academy

ASCI 097
3 credits
Summer 2020
Jeffords Hall, Room 110

Instructor: Joe Emenheiser, PhD
309A Terrill Building
joe.emenheiser@uvm.edu
Office hours by request (email for an appointment)

Course Description
In this introductory course, students will explore the breadth of disciplines and opportunities in animal science, including but not limited to animal husbandry, biotechnology, and research. Students will engage in hands-on, experiential laboratories on campus, at the Miller Research Farm on Spear Street, and at the UVM Morgan Horse Farm in Weybridge, VT to introduce animal biology and its applications in a variety of livestock and recreation species. Topics include animal behavior and handling, genetics and breeding, reproduction, health, nutrition, evaluation, and animal products and the agricultural industries built on them. Students will have the opportunity to meet and hear from experts in the field about careers in animal science. And through the residential experience of living on campus, participants will learn more about becoming a college student.

Course Learning Objectives
Student successfully participating in the Animal Science Summer Academy will have gained the following skills and knowledge:

1. Describe the comparative biology of common farm, companion, and wild animal species.
2. Understand the history of animal domestication and the role of modern domestic animals in human society.
3. Gain familiarity with the Animal and Veterinary Sciences course offerings and research opportunities at UVM.
4. Identify career interests and opportunities within the animal sciences and begin building a professional network.

Pedagogy: (optional)
The Animal Science Summer Academy course will incorporate multiple methods of teaching and learning including, lectures, guest speakers, lab and field experience, group work, and presentations.

Required Course Materials:
There is no requirement to purchase a textbook for the course. All required course materials will be provided on the course Blackboard page or via handouts. Students will have access to the UVM Library, and the instructor will encourage and assist use of this resource for optional supplementary readings and exploratory resources. Submission of assignments during the online portion of the course will require a word processor and internet access.

Blackboard or other course sites:
Blackboard will be used throughout the course and will be the method for uploading assignments and posting grades. Instructions on how to use Blackboard will be provided on the first day of class as well as online.
Attendance Policy and Classroom Environment Expectations:
You are expected to attend class from 9am-5pm unless otherwise specified by the instructor. Participation is part of your final grade, and includes not only being present, but also being an active learner by engaging in the material and asking questions or finding other ways to demonstrate engagement. Students can expect to be directly and randomly called upon to discuss reading material and assignments during class. Much of the time during this course will be spent outside of the traditional classroom setting. Students are expected to follow instructions during labs and field trips, to move efficiently between locations, and to be respectful of guest speakers, hosts, and hosts’ property. Note that all assigned readings as well as daily reflections and predictions are due at the start of class each day, beginning on the second day.

Grading Criteria/Policies:
Grades for the course will be divided evenly between the on-campus and online portions. A breakdown of points for assigned each assessment category is as follows:

<table>
<thead>
<tr>
<th>Assessment Category</th>
<th>Points</th>
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<tbody>
<tr>
<td>Daily reflections (1-2 paragraphs)</td>
<td>20</td>
</tr>
<tr>
<td>Daily predictions (critical question for the subject of the day)</td>
<td>20</td>
</tr>
<tr>
<td>Research Project (online)</td>
<td>25</td>
</tr>
<tr>
<td>Capstone Reflection (online)</td>
<td>25</td>
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<tr>
<td>Participation and attendance</td>
<td>10</td>
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Course grades will be assigned using the following grading scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
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<tbody>
<tr>
<td>A+</td>
<td>≥ 98%</td>
</tr>
<tr>
<td>A</td>
<td>94-97%</td>
</tr>
<tr>
<td>A-</td>
<td>90-93%</td>
</tr>
<tr>
<td>B+</td>
<td>87-89%</td>
</tr>
<tr>
<td>B</td>
<td>84-86%</td>
</tr>
<tr>
<td>B-</td>
<td>80-83%</td>
</tr>
<tr>
<td>C+</td>
<td>77-79%</td>
</tr>
<tr>
<td>C</td>
<td>74-76%</td>
</tr>
<tr>
<td>C-</td>
<td>70-73%</td>
</tr>
<tr>
<td>D+</td>
<td>67-69%</td>
</tr>
<tr>
<td>D</td>
<td>64-66%</td>
</tr>
<tr>
<td>D-</td>
<td>60-63%</td>
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<tr>
<td>F</td>
<td>≤ 59%</td>
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Assignments are expected on the due date as outlined in the schedule below. Assignments will be explained in class and reminders of due dates will be given. No late work will be accepted unless there are extenuating circumstances. If you believe you have extenuating circumstances, please contact the instructor as early as possible (ideally before the due date). Students are expected to complete their own work. References must be properly cited, and plagiarism or other forms of academic dishonesty will not be tolerated (see section on Academic Integrity below).

Assessments (Graded Work):
Daily reflections and prediction assignments will be due each day at the start of class. The daily assignments are to be written and will also be used in classroom discussion. Daily reflections reference the prior day’s class and are designed to ensure continued engagement and assessment. Daily predictions refer to the class scheduled for that day and will require completion of assigned readings. The course Research Project will be assigned on campus, and it will be due at the end of the first week of the online portion. The course will culminate in the Capstone Reflection, due at the completion of the online portion. Completion of the capstone assignment will be aided significantly with regular and thorough completion of the daily reflections. The Research Project and Capstone Reflection will be submitted online. There will be no graded quizzes or exams in this course. A summary of due dates for assignments is in the course schedule below.

Course Evaluation:
All students are expected to complete an evaluation of the course upon its conclusion. The evaluations will be anonymous and confidential. Information gained from the evaluations, including constructive criticisms, will be used to improve the course and instruction.
**Student Learning Accommodations:**
In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact SAS, the office of Disability Services on campus. SAS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations, which are communicated to faculty in an accommodation letter. All students are strongly encouraged to meet with their faculty to discuss the accommodations they plan to use in each course. A student's accommodation letter lists those accommodations that will not be implemented until the student meets with their faculty to create a plan.

Contact SAS:
A170 Living/Learning Center;
802-656-7753;
access@uvm.edu
www.uvm.edu/access

**Religious Holidays:**
Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time. [https://www.uvm.edu/registrar/religious-holidays](https://www.uvm.edu/registrar/religious-holidays)

**Academic Integrity:**
The policy addresses plagiarism, fabrication, collusion, and cheating.
[https://www.uvm.edu/policies/student/acadintegrity.pdf](https://www.uvm.edu/policies/student/acadintegrity.pdf)

**Grade Appeals:**
If you would like to contest a grade, please follow the procedures outlined in this policy:
[https://www.uvm.edu/policies/student/gradeappeals.pdf](https://www.uvm.edu/policies/student/gradeappeals.pdf)

**Grading:**
For information on grading and GPA calculation, go to [https://www.uvm.edu/registrar/grades](https://www.uvm.edu/registrar/grades)

**Code of Student Conduct:**
[http://www.uvm.edu/policies/student/studentcode.pdf](http://www.uvm.edu/policies/student/studentcode.pdf)

**FERPA Rights Disclosure:**
The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974.

**Promoting Health & Safety:**
The University of Vermont’s number one priority is to support a healthy and safe community:

**Center for Health and Wellbeing:**
[https://www.uvm.edu/health](https://www.uvm.edu/health)

**Counseling & Psychiatry Services (CAPS)**
Phone: (802) 656-3340
C.A.R.E.
If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (802-656-3380). If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at https://www.uvm.edu/studentaffairs
<table>
<thead>
<tr>
<th>Date</th>
<th>Morning (9am-12pm)</th>
<th>Afternoon (1pm-5pm)</th>
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</table>
| Monday, July 6th   | Introductions and syllabus review, introduction to research, campus resources, and developing a research question  
Lecture - introduction to ANIMAL BIOLOGY, DOMESTICATION, AND BEHAVIOR  
*Reading assignment: Animal Health*                                                                                                                                                                                                                                                   | Miller Farm tour, animal handling, dairy cattle haltering, equine introduction, etc.                                                                                                                                                     |
| Tuesday, July 7th  | **ANIMAL HEALTH**  
Lecture - introduction to animal welfare, diseases, biosecurity  
*Guest speaker: TBD*  
*Reading assignment: Animal Nutrition*                                                                                                                                                                                                                                             | Animal Health lab-Jeffords  
Case study group work                                                                                                                                                                                                                   |
| Wednesday, July 8th| **ANIMAL NUTRITION**  
Lecture - comparative anatomy, life cycles and nutrient requirements  
*Guest speaker: TBD*  
*Reading assignment: Animal Evaluation*                                                                                                                                                                                                                                           | Miller Farm-feedstuffs and ration balancing, work with fistulated cows                                                                                                                                                                   |
| Thursday, July 9th | **ANIMAL EVALUATION**  
Lecture - form and function, growth, body condition scoring  
*Guest speaker: TBD*  
*Reading assignment: Animal Genetics*                                                                                                                                                                                                                                             | Field trip to Shelburne Farms- facilities tour, sheep shearing demo, ultrasound                                                                                                                                                           |
| Friday, July 10th  | **ANIMAL GENETICS**  
Lecture - Mendelian genetics, quantitative genetics, genomics, animal breeding  
*Guest speaker: TBD*  
*Reading assignment: TBD*                                                                                                                                                                                                                                                   | CyberSheep simulation- computer lab  
Miller Farm- bull data selection                                                                                                                                                                                                       |
| Monday, July 13th  | **RESEARCH PROJECT**- introduction and preliminary work  
College preparation presentation.  
*Guest speaker: Kate Finley Woodruff*  
*Reading assignment: Animal Reproduction*                                                                                                                                                                                          | Library and research                                                                                                                                                                                                                     |
| Tuesday, July 14th | **ANIMAL REPRODUCTION**  
Lecture - comparative anatomy, life cycles, hormone pathways, applications  
*Guest speaker: TBD*  
*Reading assignment: Animal Reproduction*                                                                                                                                                                                               | Miller Farm- cow tracts                                                                                                                                                                                                                   |
| Wednesday, July 15th| **REPRODUCTION AND BREEDING-EQUINE**  
All-day field trip to Morgan Horse Farm, Weybridge, VT  
Breeding facility tour, stallion semen evaluation, ultrasound  
*Reading assignment: Animal Products*                                                                                                                                                                                                 |                                                                                                                                                                                                                                        |
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<tbody>
<tr>
<td>Thursday, July 16th</td>
<td><strong>ANIMAL PRODUCTS</strong>&lt;br&gt;Lecture - role of domestic animals in human society, product evaluation&lt;br&gt;&lt;br&gt;<strong>Reading assignment: TBD</strong></td>
<td>On campus labs, field trip to City Market, Dairy Bar, UVM Dining</td>
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<tr>
<td>Friday, July 17th</td>
<td>CALS Career Day and course wrap-up</td>
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<tr>
<td><strong>Online</strong>&lt;br&gt;&lt;br&gt;Week of 7/20-24</td>
<td>Research Project</td>
<td>Due to be submitted on Blackboard by Friday, July 24th at 5pm</td>
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<tr>
<td><strong>Online</strong>&lt;br&gt;&lt;br&gt;Week of 7/27-7/31</td>
<td>Capstone Reflection</td>
<td>Due to be submitted on Blackboard by Friday, July 31st at 5pm</td>
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