ANIMAL SCIENCE MAJOR: DAIRY MANAGEMENT OPTION (B.S.)

https://colsa.unh.edu/agriculture-nutrition-food-systems/program/bs/animal-science-major-dairy-management-option

Description

The ANSC: dairy management option is designed to provide students with solid training in areas important to the successful management of a dairy enterprise, for employment in related agribusinesses (e.g., pharmaceutical and feed industries), or for those wishing to pursue additional training leading to the M.S. or Ph.D. degree in dairy science or its related disciplines. Dairy management students receive training in areas such as nutrition, reproduction, diseases, genetics, lactation physiology, forages, agribusiness finance, personnel management, computer science, and public relations. The Fairchild Dairy Teaching and Research Center and the Burley-DeMerritt Organic Dairy Research Farm are modern dairy facilities. The Fairchild Dairy houses 85 lactating Holstein cows plus a similar number of non-lactating animals. The Burley-DeMerritt Farm houses 50 lactating Jersey cows plus a small number of non-lactating animals. For additional information and answers to questions regarding the option in dairy management, email Dr. Peter Erickson.

Requirements

Major Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 411</td>
<td>Introductory Biology: Molecular and Cellular</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 412</td>
<td>Introductory Biology: Evolution, Biodiversity and Ecology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 403</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 404</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 528</td>
<td>Applied Biostatistics I</td>
<td>4</td>
</tr>
<tr>
<td>BMSC 503</td>
<td>General Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>&amp; BMSC 504</td>
<td>and General Microbiology Laboratory</td>
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Select from the following:

| BMSC 501 | Biological Chemistry                                    | 4.5     |
| or BMSC 508 | General Biochemistry                               |         |

Requirements for All Animal Science/Dairy Management Option Majors

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AAS 423</td>
<td>Dairy Selection (Little Royal)</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 412</td>
<td>Introductory Biology: Molecular and Cellular</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 404</td>
<td>General Chemistry II</td>
<td>4</td>
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Discovery Course

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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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Credits 16

Sample Student Schedule by Semester: Dairy Management

First Year

Spring

AAS 423 | Dairy Selection (Little Royal)                         | 2       |

BIOL 412 | Introductory Biology: Molecular and Cellular            | 4       |

CHEM 404 | General Chemistry II                                   | 4       |

Fall

AAS 425 | Introduction to Dairy Herd Management                   | 4       |

BIOL 411 | Introductory Biology: Molecular and Cellular            | 4       |

CHEM 403 | General Chemistry I                                    | 4       |

EREC 411 | Environmental and Resource Economics Perspectives       | 4       |

Credits 18

Second Year

Spring

AAS 439 | Fundamentals of Animal Health                          | 2       |

ANSC 406 | Careers in Animal Science                              | 1       |
Students will gain a fundamental knowledge of the animal science related disciplines of:

- Anatomy & physiology
- Nutrition
- Genetics
- Disease
- Reproduction
- Animal Ethics

**Student Learning Outcomes**

1. **Anatomy & physiology**
   - Students will be able to recognize the complimentary relationship of anatomic structure and function and accurately describe the basic physiologic processes of mammalian organ systems.

2. **Nutrition**
   - Students will be able to identify, compare, contrast, and link different concepts regarding animal feeding and metabolism of carbohydrates, lipids, and protein in major livestock species and equine.

3. **Genetics**
   - Students will understand basic principles and applications of inheritance, the difference between qualitative and quantitative genetics, and be able to discuss the various disciplines within genetics.

4. **Disease**
   - Students will understand the modes of transmission of infectious diseases, recognize signs of illness associated with notable diseases in livestock species, and be able to appropriately apply general concepts of disease prevention and biosecurity to a variety of management situations.

5. **Reproduction**
   - Students will comprehend the mechanisms and endocrine control of gametogenesis, fertilization, pregnancy, and lactation and understand the variety of factors that can influence reproductive success.

6. **Animal Ethics**
   - Students will recognize the numerous ways that humans use, benefit from, and conflict with non-human animals and have an awareness of the variety of motivations and influences that drive these relationships.
   - Students will be able to develop critical questions that facilitate their independent investigation of topics related to animal science and demonstrate an integration of discipline specific knowledge through engaging in experiential education opportunities.
   - Students will be able to conduct literature searches using relevant databases to critically evaluate both academic and popular press resources pertinent to the animal sciences.
   - Students will be able to construct well-supported, effectively organized written arguments to express informed perspectives on animal science related topics. These writings will demonstrate professional style, appropriate mechanics (grammar, punctuation, and spelling), and the correct use of citations.