

## ANIMAL SCIENCE - LARGE (AS)

### Faculty:

Larry D. Morris, Chairperson  
 Rodney A. Gilbert  
 Fredrick R. Hofsaess  
 Marta Piotrow  
 John R. Plummer  
 Pamela J. Reed

The Large Animal Science Department offers a four-year Bachelor of Science degree. Students can select from two large animal majors offered by the department. The two majors are; Equine Science and Management or Livestock Science and Management. Students selecting the Equine Science major will learn the humane care, science, use and production of horses as they are used for pleasure and profit in the Equine industry. Students selecting the Livestock Science major will also learn the human care, science, use, and production of farm animals as they are used for the production of meat and fiber.

The Department maintains livestock facilities which give students an opportunity to participate in the care, breeding, and management of beef cattle, sheep, swine, and horses. All livestock facilities are located on campus and within walking distance of the dormitories and classrooms. Graduates of the Large Animal Science Department have a wide variety of career options available due to the diversity of the collegiate training and the work experience related to the major.

With a 99% rate of placing graduates within six months of graduation, it is no wonder that graduates have a variety of employment opportunities available in livestock production, agribusiness, education, and in government. An average of 83% of the Animal Science graduates obtain employment within the animal science industry within six months of graduation.

Delaware Valley College Animal Science graduates are sought by industry for employment as livestock managers and herd managers, breed association representatives, extension livestock specialists, and artificial insemination technicians. As a result of training in both livestock production and business, many graduates obtain employment with pharmaceutical companies, feed manufacturers, and veterinary supply companies. Students graduating recently with a degree in Animal Science (Large) have found positions such as: Animal Caretaker, Cooperative Extension Agent, Lab Technician, Herdsperson, Kennel Manager, and Zookeeper.

Animal Science also offers the opportunity for a career in education. Many graduates are involved with 4-H, and FFA programs as well as teaching vocational

education and science in high schools. For graduates interested in pursuing additional training in either veterinary medicine or graduate studies, one will find DVC alumni attending universities throughout the U.S.

The total number of credits required for graduation with a major in Equine Science in the Large Animal Science Department is 124+4 credits earned for successful completion of the Employment Program and 128+4 credits for the Livestock Science major.

## RECOMMENDED COURSE SEQUENCE

### *Equine Science and Management Major*

#### FRESHMAN YEAR

##### First Semester

| Course No.   | Course Title                     | Credits   |
|--------------|----------------------------------|-----------|
| LA 1020      | Skills For College Success ..... | 1         |
| AS 1006      | Intro to Animal Science.....     | 3         |
| EN 1101      | English I.....                   | 3         |
| BY 1116      | Biological Science I .....       | 3         |
| CH 1103      | Chemistry I .....                | 4         |
| PE 1109      | Physical Education I .....       | 1         |
| MP 1102      | College Algebra or               |           |
| MP 1203      | Elementary Functions .....       | 3         |
| <b>Total</b> | .....                            | <b>18</b> |

##### Second Semester

|              |                                     |           |
|--------------|-------------------------------------|-----------|
| AS 1045      | Livestock Industries & Careers..... | 2         |
| EN 1211      | English II.....                     | 3         |
| BY 1217      | Biological Science II .....         | 3         |
| CH 1203      | Chemistry II.....                   | 4         |
| MP 1203      | Elementary Functions .....          | 3         |
| <b>Total</b> | .....                               | <b>15</b> |

#### SOPHOMORE YEAR

##### First Semester

| Course No.   | Course Title                          | Credits   |
|--------------|---------------------------------------|-----------|
| PE 1109      | Physical Education I .....            | 1         |
| CH 2003      | Principles of Organic Chemistry ..... | 4         |
| AE 2007      | Feed Grains & Forages .....           | 3         |
| AS 1101      | Stable Management.....                | 3         |
| BY 2003      | Genetics .....                        | 3         |
| IT 1011      | Information Technology Concepts ....  | 1.5       |
| IT 1012      | Computer Applications .....           | 1.5       |
| <b>Total</b> | .....                                 | <b>16</b> |

##### Second Semester

|              |                             |           |
|--------------|-----------------------------|-----------|
| PE 1209      | Physical Education II ..... | 1         |
| AS 4219      | Horse Breeding Mgt.....     | 3         |
| ES 1202      | Equine Health Mgt.....      | 3         |
| LA 2005      | Speech.....                 | 3         |
| LA 1060      | Intro to the Arts.....      | 3         |
|              | Electives .....             | 3         |
| <b>Total</b> | .....                       | <b>16</b> |

## Programs

### JUNIOR YEAR

#### First Semester

| Course No. | Course Title                                     | Credits |
|------------|--|---------|
| LA 3032    | American History and Government Since 1933 ..... | 3       |
| AS 4106    | Principles of Animal Nutrition .....             | 3       |
| BA 1005    | Intro to Business .....                          | 3       |
|            | Electives .....                                  | 5       |

**Total .....**14

#### Second Semester

|         |                                     |   |
|---------|-------------------------------------|---|
| ES 3217 | Equine Anatomy and Physiology ..... | 3 |
| LA 4037 | Non-Western Societies .....         | 3 |
| EN 2028 | Intro to Literature .....           | 3 |
| AS 3210 | Mare and Foal Management .....      | 3 |
|         | Electives .....                     | 3 |

**Total .....**15

### SENIOR YEAR

#### First Semester

| Course No. | Course Title                     | Credits |
|------------|----------------------------------|---------|
| DS 4134    | Physiology of Reproduction ..... | 3       |
| AS 4111    | Yearling Horse Sale Mgt. ....    | 2       |
| ES 2107    | Equine Nutrition .....           | 3       |
|            | Macroeconomics .....             | 3       |
|            | Electives .....                  | 4       |

**Total .....**15

#### Second Semester

|         |  |   |
|---------|--|---|
| AS 4016 | Seminar .....                                  | 1 |
| LA      | Philosophy/Psychology/<br>Sociology Area ..... | 3 |
| ES 4222 | Equine Business Mgt .....                      | 3 |
| LA 2040 | Modern History of Western Societies ...        | 3 |
|         | Electives .....                                | 5 |

**Total .....**15

### Livestock Science and Management Major

### FRESHMAN YEAR

#### First Semester

| Course No. | Course Title                     | Credits |
|------------|----------------------------------|---------|
| LA 1020    | Skills For College Success ..... | 1       |
| AS 1006    | Intro to Animal Science .....    | 3       |
| EN 1101    | English I or                     |         |
| EN 1111    | Advanced English I .....         | 3       |
| MP 1102    | College Algebra or               |         |
| MP 1203    | Elementary Functions .....       | 3       |
| CH 1103    | General Chemistry I .....        | 4       |
| BY 1116    | Biological Science I .....       | 3       |

**Total .....**17

### Second Semester

|         |                                      |   |
|---------|--------------------------------------|---|
| AS 1045 | Livestock Industries & Careers ..... | 2 |
| EN 1201 | English II or                        |   |
| EN 1211 | Advanced English II .....            | 3 |
| MP 1203 | Elementary Functions .....           | 3 |
| CH 1203 | General Chemistry II .....           | 4 |
| BY 1217 | Biological Science II .....          | 3 |

**Total .....**15

### SOPHOMORE YEAR

#### First Semester

| Course No. | Course Title                          | Credits |
|------------|---------------------------------------|---------|
| PE 1109    | PE I .....                            | 1       |
| DS 3029    | Livestock Genetics .....              | 2       |
| CH 2003    | Principles of Organic Chemistry ..... | 4       |
| AE 2007    | Feed Grains & Forages .....           | 3       |
| LA 2005    | Speech .....                          | 3       |
| IT 1011    | Information Technology Concepts ...   | 1.5     |
| IT 1012    | Computer Applications .....           | 1.5     |

**Total .....**16

#### Second Semester

|         |                                   |   |
|---------|-----------------------------------|---|
| PE 1209 | PE II .....                       | 1 |
| EN 2028 | Introduction to Literature .....  | 3 |
| AS 2116 | Livestock Evaluation .....        | 3 |
| AS 3123 | Animal Husbandry Techniques ..... | 2 |
| LA 1060 | Intro. to the Fine Arts .....     | 3 |
|         | Electives .....                   | 4 |

**Total .....**16

### JUNIOR YEAR

#### First Semester

| Course No. | Course Title                                     | Credits |
|------------|--|---------|
| AS 4106    | Principles of Animal Nutrition .....             | 3       |
| LA 3032    | American History and Government Since 1933 ..... | 3       |
| BA 2008    | Macroeconomics .....                             | 3       |
|            | Production Option .....                          | 3       |
|            | Electives .....                                  | 4       |

**Total .....**16

#### Second Semester

|         |                                     |   |
|---------|-------------------------------------|---|
| DS 3118 | Animal Anatomy and Physiology ..... | 4 |
| LA 4037 | Non-Western Societies .....         | 3 |
| DS 3010 | Animal Feeding and Nutrition .....  | 3 |
| AS 4214 | Animal Diseases .....               | 3 |
|         | Elective .....                      | 3 |

**Total .....**16

**SENIOR YEAR**

**First Semester**

| <b>Course No.</b>  | <b>Course Title</b>                     | <b>Credits</b> |
|--------------------|---|----------------|
| LA 2040            | Modern History of Western Societies ... | 3              |
| DS 4134            | Physiology of Reproduction.....         | 3              |
|                    | Production Option .....                 | 3              |
|                    | Business Option .....                   | 3              |
|                    | Electives .....                         | 4              |
| <b>Total .....</b> |   | <b>16</b>      |

**Second Semester**

|                    |  |           |
|--------------------|--|-----------|
| AS 4016            | Seminar .....                                  | 1         |
|                    | Philosophy/Psychology/<br>Sociology Area ..... | 3         |
|                    | Production Option .....                        | 3         |
|                    | Electives .....                                | 5         |
| <b>Total .....</b> |  | <b>12</b> |

**Production Options for Livestock Science Major (choose three):**

|         |                                |
|---------|--------------------------------|
| AS 4014 | Beef Science (senior year)     |
| AS 4028 | Swine Science (senior year)    |
| AS 4027 | Sheep Science (senior year)    |
| AS 4029 | Poultry Science (junior year)  |
| SA 3150 | Alternative Animal Agriculture |

**Business Options (choose two)**

|         |                            |
|---------|----------------------------|
| BA 1005 | Intro to Business          |
| BA 3141 | Small Business Management  |
| BA 3028 | Supervision and Management |
| AB 4113 | Farm Management            |
| BA 3027 | Human Resource Management  |
| BA 2252 | Accounting Fundamentals    |

**Minors**

Students majoring in Large Animal Science may enroll in a minor including Pre-veterinary Science. Substitutions may be arranged in advance with permission of the Department Chairperson.

**International Exchange**

Large Animal Science students may participate in a one-semester exchange program at Hartpury College, Gloucestershire, Great Britain during their Junior Spring semester. Contact the Department for application procedures.

**BIOLOGY (BY)**

Faculty:

Ronald E. Johnson, Chairperson  
 Richard N. Bortnick  
 Bryna Donnelly  
 Janice L. Haws  
 Cynthia Keler  
 Camille McQuillan  
 John M. Mishler  
 Kathryn S. Ponnock  
 Christopher Tipping

There are three reasons why Delaware Valley College Biology graduates do well: our faculty, our curriculum, and our facilities. The faculty are specialists in their respective areas. They are interested in the educational welfare of each student and generate a thirst for learning.

The Biology Department offers a curriculum that provides the student with a broad core of background information in biology and related disciplines. This prepares the student for many careers in biology, or for advanced study in the health professions or graduate school. In addition to gaining acceptance to professional and graduate schools, recent Biology graduates from Delaware Valley College have found positions as: Biologists, Inorganic Analytical Chemists, Quality Assurance Technicians, Bio Technicians, Environmental Laboratory Technicians, and Teratologists. In addition, a series of biology course options and free elective courses offers the student the opportunity to major in an area of his or her own choosing.

The Biology Department is housed in a modern building, and is well furnished with laboratory instruments and equipment with which the student is encouraged to develop proficiency. In addition, there are a variety of natural study areas available on or near campus. Members of the department are also involved in a number of staff-guided student research projects, as well as projects of faculty interest, which offer the opportunity to engage in research.

Five major areas, pre-professional (which includes pre-med and pre-vet), microbiology and biotechnology, botany, zoology, and environmental biology allow students, with departmental counseling, to focus their program to better fit their career goals. Incoming freshmen must declare a major area after successfully completing 30 credits. Transfer students bringing in 30 or more credits, must declare a major area as part of the transfer process. The freshman year program is the same for all entering Biology majors.