process from program conceptualization, script and storyboard development, preproduction planning, single camera field production non-linear editing and audio mixing. Students will work individually and in teams to complete assignments. 3 hours – lecture and laboratory — 3 credits.

EN 4025
Video Production II
This course helps students develop professional level skills in the production of video in a multimedia environment and produce a finished DVD program to be added to their professional portfolio. Students will build upon the basic skills learned in Digital Video Production I. These include advanced video editing, script writing, working with non-professional actors, DVD authoring, motion graphics, compositing and animation graphics. A significant portion of class will be devoted to the development and production of the students’ final project. 3 hours — lecture and laboratory — 3 credits.

EN 4050
English Literature of the 19th and Early 20th Century
British texts from major writers of the Romantic, Victorian, and Modern periods are highlighted in this class. The focus is on the major writers with an historical sequence to the course. Experimental works will be increasingly emphasized as the class approaches the contemporary period. Prerequisite: English I and II or Advanced English I and II. 3 hours lecture and discussion — 3 credits

EN 4055
Themes in Literature
This course focuses on a particular theme in literature, allowing students a greater depth of approach than possible in other courses. The course will concentrate on an intriguing thematic area or author, such as the works of William Faulkner or war-protest literature. Pertinent historical and philosophical information will provide situational context for the theme’s development. Through reading and writing assignments, students will gain an appreciation of significant literary themes. Prerequisite: English I and II or Advanced English I and II. 3 hours lecture and discussion — 3 credits

EN 4152
Seminar (English)
As the capstone of the English major’s program, the student studies, under the guidance of a faculty member, a specific period or author. This tutorial approach culminates in the preparation of a paper of considerable length and quality and an oral defense of it. Prerequisite: English I and II or Advanced English I and II and senior standing. 3 hours Lecture and Discussion — 3 credits

ANIMAL SCIENCE
EQUINE STUDIES

ES 1101
Stable Management
An introductory level course designed to emphasize the management and practical care of equine facilities and horses. Topics include stable design, pasture management, preventive health care, basic first aid, nutrient requirements, feed quality and storage, financial considerations, and personnel management. Required management participation involves time commitments in addition to regularly scheduled class hours. 3 hours Lecture and 2 hours Laboratory — 3 credits

ES 1102
Introduction to Equine Science
This introductory level course covers the history and use of the horse along with the history of equitation. Students will study various equestrian disciplines and breeds with respect to their history, governing organizations, celebrated individuals, and current popularity. The class will examine the state of the horse industry today and trends to expect in the future. Additionally, the course will provide an overview of horse psychology, conformation and movement, functional anatomy, and genetics. 3 hours Lecture — 3 credits

ES 1106
Equine Practicum I
Students will take part in Equestrian Center operations, acquiring basic skills in stable management and facility maintenance. An integral part of this course is the development of a solid work ethic and teamwork skills. Students will be formally evaluated in these areas twice per semester. Each student will be assigned a horse for whose care they are responsible outside of regularly scheduled stable crew hours. Inspections will chart the students’ conscientiousness and progress in all facets of horse care. Essential horse management skills will be practiced and tested. This course incorporates the British Horse Society curriculum for practical management skills and theory for Stages I and II. 1 hour lecture and 3 hours Laboratory — 2 credits
ES 1202
**Equine Health Management**
The common infectious and non-infectious equine diseases, parasitism, lameness, and first aid are discussed in detail. Emphasis is placed on detection and early treatment of equine ailments. 3 hours Lecture — 3 credits

ES 1205
**Equestrian Event Management**
This course is designed to provide the future equine professional with the tools necessary to organize equine events, such as horse shows and clinics. Major topics include planning, financing, insurance, and advertising. Required activities outside of regularly scheduled class hours will be assigned. Students will assist in the planning and staging of Equestrian Center activities. 1 hour Lecture — 1 credit

ES 1208
**Equine Practicum II**
A continuation of ES 1106, see course description above. Prerequisite: Equine Practicum I. 1 hour Lecture and 3 hours Laboratory—2 credits

ES 2107
**Equine Nutrition and Feeding**
The unique digestive anatomy and physiology of the horse are emphasized. The common roughage, concentrates, and commercial feeds used in the industry are discussed along with design of feeding programs to meet the needs of various groups of horses. 3 hours Lecture — 3 credits

ES 2111
**Horse Show Management**
The principles taught in this course are utilized to plan and present the annual Delaware Valley College Horse Show, as well as clinics and other equine activities. Project activities outside of regularly scheduled class hours will be assigned. Prerequisite: Equestrian Event Management. 1 hour Lecture — 1 credit

ES 2118
**Equine Massage and Therapy**
Material will be presented on massage techniques and applicable muscle physiology. Students will gain an understanding of equine anatomy, learn how to perceive reactive areas, plan remedial work, and practice various massage techniques on horses in the Equestrian Center. Adjunctive therapies will be introduced. 2 hours Lecture and 1 hour Laboratory — 2 credits

ES 2210
**Driving the Single Horse***
Students learn the basics of driving through use of the rein board, ground driving, and driving experienced horses. Safety and correct driving techniques are stressed. Knowledge of harness function and fit is emphasized. 1 hour Lecture and 2 hours Laboratory — 2 credits

ES 2370
**Employment Program**
Each student in Equine Studies is required to spend 500 hours in approved jobs related to the student’s major. Each employment experience that will be used toward the Employment Program must be registered with the Office of Career and Life Education before employment commences — 4 credits

*ES 3123
**Intermediate Driving**
This course is a continuation of Driving the Single Horse. Students will strive to improve their skills with increased driving time, more advanced rein handling, and the opportunity to drive horses in different levels of training. Prerequisite: Driving the Single Horse. 4 hours Laboratory — 2 credits

ES 3124
**Equine Behavior**
Students explore the human-horse relationship and equine behavior through the study of evolution, sensory physiology, learning processes of the horse, and different training techniques. Students are provided with the principles necessary to develop a relationship between themselves and the horse and create a foundation for further exploration into the complex behaviors of the horse. 3 hours Lecture and Demonstration/Discussion — 3 credits

*ES 3210
**Teaching Techniques**
In this course, students will build upon the foundation gained in Introduction to Equine Instruction. Lectures will focus upon effective lesson planning and execution. Students will be exposed to alternative schools of thought, teaching methods, and instruction techniques. During the lab portion of the course, each student will execute their lesson plans under the supervision of the course instructor. Prerequisite: Introduction to Equine Instruction. 1 hour Lecture and 4 hours Laboratory — 3 credits
Course Descriptions

ES 3217
Equine Anatomy and Physiology
This course is designed to acquaint the student with the anatomy and physiology of the horse. Special emphasis is placed on the anatomical and physiological conditions of the performance horse. 3 hours Lecture — 3 credits

*ES 3218
Introduction to Equine Instruction
This course is designed to prepare potential riding instructors, introducing fundamentals of teaching in regard to teaching philosophy, learning psychology, riding theory, and powers of instruction. Practice teaching will be included. Labs are designed to prepare students for CHA and BHS Instructor Certifications. Required observations outside of regularly scheduled class hours will be assigned. Prerequisite: Basic Schooling and Principles of Jumping. 2 hours Lecture & 2 hours Laboratory — 3 credits

ES 3221
Judging and Course Design
An intermediate level course which provides a basic understanding of judging both horse and rider performance. Students compare and contrast judging criteria and scoring systems for hunters, jumpers, eventing, and dressage performance divisions, as well as for hunter and dressage breeding divisions. Offered in Spring Semester of even numbered years. 2 hours Lecture — 2 credits

ES 3000 or 4000
Selected Topics in Equine Studies
Special projects designed to meet individual needs of senior students in specialized fields within equine studies. Projects will be arranged with a department faculty member and the approval of the Department Chairperson. Prerequisite: Permission of the Department Chairperson. Minimum 3 hours of effort per week per credit — limited to 2 credits

*ES 4018
Training and Conditioning
This course explores the horse’s nature and learning mechanisms with particular reference to the governing influence upon training philosophy and methodology. Emphasis is placed upon working horses from the ground as opposed to riding theory. Students will relate classical training principles endemic to all sport horse disciplines. Topics to be discussed will include longeing techniques and use of various auxiliary equipment, starting the young horse, long reining and work-in-hand, dealing with the problem horse, therapeutic options to maximize the sport horse’s performance capabilities, and conditioning theory and approaches. 2 hours Lecture and 2 hours Laboratory — 3 credits

ES 4219
Horse Breeding Management
A course designed to acquaint the student with the operation of a horse breeding farm. Teasing, breeding, foaling, mare and stallion care, and foal care are emphasized. Students manage the College’s breeding facility. Required management participation involves time commitments, in addition to regularly scheduled class hours. 2 hours Lecture and 3 hours Laboratory — 3 credits

ES 4222
Equine Business Management
This senior level course requires the student to draw upon previous equine and academic courses, as well as their personal experiences. Topics covered in this course include proper documentation and record-keeping, facility design, operation, and management, insurance and risk management, marketing and advertising, financing, tax planning, and the law as it applies to the horse industry. Throughout this course students will research and develop a comprehensive business plan for an equine venture of their choice. 3 hours Lecture — 3 credits

*ES 5000
Hartpury Exchange
A semester exchange with Hartpury College in Gloucestershire, England for qualified Juniors in the Equine Studies majors. Students will pursue modules in pertinent areas selected in consultation with program advisors. Optional modules may include: Equitation, Grassland Management, Equine Therapy, Equine Behavior, Stud Management, and Applied Equine Nutrition. Prerequisites: 3.0 GPA, application to the Exchange, and approval of Hartpury Selection Committee.

* These courses are for Equine Studies students only.

Riding Skills Course Descriptions
Equine Studies students are placed into riding skills courses according to their level of riding skill. All classes consist of practical skills application along with integrated readings and assignments correlating pertinent theory. All Riding Skills students are required to undertake written exams on theory as
well as performance tests. Small class size maximizes individual attention and builds trust between student, instructor, and horse. Students are expected to care for their horse and tack before and after each lesson. Once the required credits of Riding Skills are fulfilled, these courses cannot be taken as electives. Students are expected to achieve by graduation a minimum competency level of Flatwork and Gridwork I. 4 hours Laboratory — 2 credits for each course.

*ES 2032
**Fundamentals of Flatwork and Jumping I**
A course for the novice rider, establishing proper position, balance, and use of the aids, both on the flat and over cavalletti and small fences. Emphasis will be placed upon security, non-interference, and an understanding of the horse. Students will learn basic schooling figures.

*ES 2033
**Fundamentals of Flatwork and Jumping II**
For the rider who is secure on the flat, but has had little jumping experience. Flatwork skills will be strengthened, including work without stirrups. Students will gain more confidence at the canter and over a simple jump course.

*ES 2034
**Balanced Equitation I**
An introduction to basic concepts of balanced seat equitation for all disciplines, using the principles of Centered Riding. Emphasis will be placed upon acquiring a balanced, supple position on the flat and over poles with limited work over fences. Centered Riding techniques use body awareness and imagery to decrease tension and increase effectiveness. Instructors for this course are recognized Centered Riding Instructors.

*ES 2035
**Basic Schooling**
This class offers an introduction to classical schooling theory for the intermediate rider. At this level emphasis will shift to influencing the horse. Concepts of contact, bending, and improving the horse’s balance will be the primary focus, with students becoming acquainted with rhythm, suppleness, impulsion, and riding the horse from leg to hand. By semester’s end, students should be able to maintain a consistent frame, thereby improving the horse’s way of going.

*ES 2036
**Flatwork and Gridwork I**
Flatwork and Gridwork is an intermediate course which provides the rider the opportunity to gain more strength and control over fences while polishing the flat work introduced in Basic Schooling. Prerequisite: Basic Schooling.

*ES 2037
**Principles of Jumping**
A medium level jumping course emphasizing the relationship between work on the flat and over fences. Students will progress from cavalletti exercises and jumping grids to jumping small courses. Elements of successful show ring riding will be introduced step-by-step such as riding lines, related distances, bending lines, and jumping off of turns. This course is geared towards Hunter Seat Equitation. Prerequisites: Basic Schooling.

*ES 2038
**Intermediate Dressage**
A more intensive study of riding as art and as correct development of the horse. Students will be exposed to the principles of the dressage training pyramid, with emphasis upon developing engagement, straightness, and suppleness. Lateral movements will be introduced toward the end of the semester. Prerequisite: Basic Schooling.

*ES 2039
**Flatwork and Gridwork II**
This is a course for the high intermediate rider in which they can further practice the jumping skills acquired in Principles of Jumping while polishing the flat work introduced in Intermediate Dressage. Prerequisites: Principles of Jumping and Intermediate Dressage.

*ES 2040
**Comparative Techniques in Jumping**
A course for the more advanced rider, comparing the riding styles and training methods necessary to prepare the horse for hunter shows, horse trials, and cross-country competitions. Introduction to cross-country jumping, riding over undulating terrain, and natural obstacles will be introduced. Students will explore conditioning techniques and pacing, and will practice more complicated jumping combinations and schooling techniques. Prerequisites: Flatwork and Gridwork II.
**Course Descriptions**

*ES 2041

**Advanced Methods of Training**

A course for the experienced rider focusing upon advanced techniques and gymnastic exercises designed to promote the horse’s athletic development. Complex schooling patterns and lateral work will be practiced. Prerequisite: Intermediate Dressage.

*ES 2042

**Balanced Equitation II**

An intensive riding skills development course, focusing on improving the rider’s posture and effectiveness. The course emphasizes kinesthetic awareness, postural realignment, and elimination of muscular tension to produce a more effective seat. Students are taught to redirect unnecessary tension into useful energy.

*ES 2043

**Special Training Project**

For the advanced student, in the junior or senior year, who wishes to pursue a training or rehabilitative project with a selected horse, or who would like to train intensively for open competition. Past projects have included the Art and Etiquette of Side Saddle, Starting a Young Horse, Training and Preparing a Young Hunter, Reconditioning/Rehabilitation Project, Advanced Driving, Preparing for Novice Horse Trials. Prerequisite: Permission of the Department Chairperson.

*ES 2044

**Hartpury Riding Students**

Open only to Hartpury Exchange students studying in the Equine Studies Program at Delaware Valley College

* These courses are for Equine Studies students only.

**Food Science and Management**

FS 1123

**Introduction to Foodservice Systems**

An introduction to the field of restaurant and foodservice management. Included is a discussion of the history of foodservice, the different types of foodservice operations, career opportunities available, future trends, and management. 3 hours Lecture — 3 credits

FS 1130

**Food, Culture and Cuisine**

A study of foods from cultures of a diverse range of countries by examining the foods they produce and their culinary traditions and practices. Lecture includes the respective geography, crop production, religion, history and sociology of each region. Preparation of ethnic meals in the laboratory is part of the ethnographic study of each region. The student will develop a sophisticated understanding of how the values and ways of life of peoples around the globe relate to the development of various foods. There is a fee for ingredients used in the course. 2 hours Lecture and 3 hours Laboratory — 3 credits

FS 1203

**Science and Technology of Foods**

This course explores the application of science and technology to foods. The goal of this course is for students to gain a basic understanding of molecular components of foods, relationships between food composition and food structures and functions, and the relationships of molecular properties to food characteristic and quality. The interaction, reaction, and evaluation of foods due to formulation, processing and preparation are considered. The economic, culinary performance, nutritional and food safety issues that relate to the processing and marketing of foods are also considered. Lectures elucidate the role of engineering, biotechnology, chemistry, biochemistry, nutrition, toxicology, and microbiology in supplying the world with safe and nutritious food. 2 hours Lecture and 3 hours Laboratory — 3 credits

FS 1205

**Principles of Professional Cooking**

This course will provide a foundation of fundamental knowledge of standards, principles, and techniques required for food production. The physical characteristics of food components are introduced as students learn their selection, care, and preparation. Emphasis is placed on foodservice terminology and quantity production. 2 hours Lecture and 3 hours Laboratory — 3 credits

FS 2116

**Physical Sciences and Food**

The objective of this course is to illustrate to the student how the physical sciences are applied to the evaluation and processing of foods. Students will also work with computational methods which are applied in technical work and develop skills in writing technical reports. Prerequisite: Elementary Functions. 2 hours Lecture and 3 hours Laboratory — 3 credits

FS 2212

**Sanitation Management**

Topics covered in this course include the microbiology of sanitation; communicable diseases associated