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: EN I and EN II or Advanced EN I and II. 3 hours lecture and discussion – 3 credits

EN 4152
Senior Seminar
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

Employment Program

EN 2370
Employment Program
Each student in English is required to spend 500 hours in approved jobs related to the student's major. Registration for each Employment Program must occur prior to the beginning of a relevant experience. Registration materials are available from the Office of Career and Life Education, located in Segal Hall. – 4 credits

ANIMAL SCIENCE
EQUINE STUDIES (ES)

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. 5 hours Laboratory—2 credits
Course Descriptions

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 2450  
**Equine Behavior**  
Students will explore the human-horse relationship and equine behavior through the study of evolution, sensory physiology, learning processes of the horse, and different training techniques. The goal of this course is to provide students 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 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 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

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 & 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 will 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 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 Program Director. Minimum 3 hours of effort per week per credit—limited to 2 credits.

ES 4018  
**Training and Conditioning***  
This course begins with an exploration of the horse’s nature and learning mechanisms with particular reference to their 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 Junior and Senior 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 include: 3.0 GPA, completion of application form, and approval of Hartpury Selection Committee. Contact the Director of Equine Studies for Application Information. 17 credit hours upon successful completion.

*These Courses are for Equine Studies Majors 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 cavaletti 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.
Course Descriptions

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 cavaletti 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, straightforwardness, 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.

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 their 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. By Director of Equine Studies permission only.
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 Majors only

Food Science and Management (FS)

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 with foods; insect and rodent control; chemistry of detergents and sanitizers; water and wastewater treatment; plant and equipment design; HACCP systems in food processing and foodservice; personnel training and motivation. 2 hours Lecture and 3 hours Laboratory—3 credits

FS 3000, 4000
Selected Topics I and II
Special projects designed to meet individual needs of students in the specialized fields of food and agriculture. Projects will be arranged on a one-to-one basis with a department faculty member and with the approval of the Department Chairperson. 3 hours of student/faculty instruction per week—1 credit each

FS 3120
Introduction to Nutrition
Chemical composition of nutrients, their digestion, transport and metabolism, and their occurrence in foods are introduced. Nutrition throughout the life cycle is discussed, as well as topics of current interest such as sports nutrition and relationship of diet and behavior. 3 hours Lecture—3 credits