

EQUINE SCIENCE (ESCI)

ESCI 110. Equine Anatomy & Physiology. (3 Credits)

The study of the anatomy and physiology of horses' body systems: skeletal, muscular, respiratory, cardiovascular, neurological, endocrinological, digestive, and reproductive systems. 3 credits (3 lecture hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

ESCI 130. Equine & Stable Management. (3 Credits)

Lecture subjects include general knowledge and observation of horse health, e.g., condition, dentistry, internal and external parasites, limb and hoof care, and shoeing and trimming, as well as stable management and employee success. Laboratory skills include, leg wraps, basic restraints, equipment applications, hoof trimming and shoeing, and fitting and showmanship. 3 credits (2 lecture hours, 2 laboratory hours), fall semester

ESCI 140. Equine Judging. (2 Credits)

Evaluating and placing conformation and performance classes of various breeds of horses with an emphasis on the stock breeds. Proper use of terminology as it applies to conformation and performance classes will be taught. Video and live classes will be used as a tool for properly evaluating horses and their performance. 2 credits (1 lecture hour, one 2-hour laboratory), spring semester

ESCI 150. Farm Practicum I Equine. (2 Credits)

Hands-on practical experience in stable, farm management. Mucking, grooming, feeding, general maintenance of arena, paddocks, stable, and stable. 2 credits (3 hours per day, 7 days per week for 2 2-week sections), fall semester

ESCI 151. Farm Practicum II (Equine). (2 Credits)

Hands-on practical experience in stable and farm management as well as supervising work details and management of horses. 2 credits (3 hours per day, 7 days per week for 2 2-week sections), fall or spring semester

ESCI 170. Draft Horse Management. (2 Credits)

Lecture topics emphasize a survey of today's industry, breeds, history, and conformation, principles of harnessing and hitching, and management of draft horses. Also included are showing procedures, breeding, foaling and training. Laboratory consists of hands-on experience in the handling, harnessing, hitching, driving, care and management of draft and driving horses. 2 credits (1 lecture hour, 3 laboratory hours), spring semester

ESCI 210. Equine Nutrition. (3 Credits)

Functions and properties of nutrients, the digestive system of the horse as compared to simple stomached animals and ruminants, the effects of proper nutrition on horses of different ages and levels of exercise. Labs on the composition and nutritive value of feeds, the use of feeding standards in balancing rations and forage and concentrate identification. Yearly feed costs under set conditions. 3 credits (2 lecture hours, one 2-hour laboratory), fall semester Prerequisite: ESCI 110 with a C- or better or permission of instructor 1 credit (2 laboratory hours), spring semester

ESCI 225. Equine Artificial Insemination. (1 Credit)

The artificial insemination of horses. Topics and competencies include A-V types and preparation, stallion collection, semen evaluation, teasing and mare preparation, and insemination techniques. Co-requisite/ Prerequisite: ESCI 305 1 credit (2 laboratory hours), spring semester

ESCI 235. Fitting And Marketing-Equine. (1 Credit)

The fitting and marketing of various breeds of horses. Topics include records, pedigree evaluation. Actual experience in the sales preparation of horses and mechanics of sales operation through direct participation in the annual fall college standardbred auction. 1 credit (3 laboratory hours), fall semester

ESCI 300. Internship In Equine Husbandry. (4 Credits)

Students work in an approved job in the equine industry in this internship. Comprehensive oral and written reports are required as well as an employer and staff evaluation. The student will give an oral presentation. Prerequisite: Completion of one semester in Equine Science and approval/ permission of staff 4 credits (12-week, 480-hour minimum), fall or spring/ or summer semester

ESCI 305. Equine Reproduction/Mgt. (3 Credits)

Anatomy and Physiology related to the functional performance of the male and female reproductive systems. Processes involved with the formation of the sperm and ova; estrous cycle of the horse; methods of semen collection and insemination. Breeding problems and the importance of selection and management are also emphasized. Basic Genetics applicable to the improvement of horses, color genetics and inherited abnormalities are covered. Prerequisite: ESCI 110 with a C- or better, ESCI 130 or approval from instructor. 3 credits (2 lecture hours, 2 Laboratory hours), spring semester This course satisfies the Liberal Arts and Sciences requirement and the SUNY General Education Requirement for Natural Science (and Scientific Reasoning).

ESCI 310. Applied Equine Nutrition. (3 Credits)

Review of basic nutrition principles. Application of theoretical principles of nutrition as applied to feeding groups of horses. Ration balancing for different classes of horses combined with feeding trials to assess ration efficiency. Emphasis on feeding for growth and performance within economic parameters. Avoidance of metabolic and nutritional disorders. Discussion of nutrient metabolism and biochemistry of nutrition. Labs on ration balancing, group feeding, performance analysis relating to rations. Prerequisites: ESCI 210 with a C- or better 3 credits (2 lecture hours, 2 laboratory hours), fall semester

ESCI 312. Equine Health & Lameness. (3 Credits)

Emphasis on etiology, diagnosis and treatment of lameness. Metabolic, bacterial, viral, fungal and parasitic diseases of the horse. Prerequisite: ESCI 110 with a C- or better or permission of instructor 3 credits (3 lecture hours), spring semester

ESCI 313. Lab in Equine Health Lameness. (1 Credit)

Application of the principles learned in Equine Health and Lameness to the health care of the college's horse herd. Subjects covered will include routine vaccination and deworming, blood testing, dental care and lameness evaluation. Prerequisite/co-requisite: ESCI 312 1 credit (2 laboratory hours), spring semester

ESCI 315. Equine Business Management. (3 Credits)

Content will emphasize equine enterprise management. Topics to include equine inventories, measurement and cost determination of enterprise inputs, employer labor responsibilities, employee evaluation, contractual and billing procedures, insurance, facility evaluation and work reports. Prerequisite or co-requisite: ERID-ESTB 300 or ESCI 320-340; ESCI 335-345; and AGBS 240 Farm Management and Finance 3 credits (3 lecture hours) fall semester

ESCI 320. Equine Young Stock Management. (1 Credit)

This course provides hands-on and management skills needed by working equine farm managers. It will include such skill areas as weaning foals, young stock management, identification, record keeping and sales preparation of yearlings. The course will also deal with pre-breeding season techniques such as, semen evaluation in stallions and photoperiod regulation in mares. Prerequisites: ESCI 305 with a B or better, , ESCI 225 with a B or better, and ERID 250 or ERID 240 with a B or better, or permission of the instructor . 1 credit (2 laboratory hours), fall semester

ESCI 330. Farrier Science. (2 Credits)

This course is designed to teach students the science of trimming, shoeing and resetting shoes on a variety of horses, based on an understanding of the anatomy of the horse's hoof and lower leg structure. Students will learn to use a forge to make different shoes. Prerequisite: ESCI 110, ESCI 130 2 credits (1 lecture hour, 3 laboratory hours), fall semester

ESCI 335. Equine Aquatic Therapies. (2 Credits)

This course will provide an introduction to the aquatic modalities used in equine rehabilitation and athletic conditioning of horses. Students will gain practical experience working with the underwater treadmill, cold salt water spa, and swimming. Current scientific research on aquatic therapies as they relate to both rehabilitation and conditioning will be discussed. Prerequisites: ERID 250 or ERID 240 or ESTB 210 or ESTB 200, ESCI 312 with a C or better or permission of instructor 2 credits (1 lecture hour, 6 laboratory hours), fall and spring semesters

ESCI 340. Equine Promotion & Sales. (3 Credits)

This course is designed to provide students with the opportunity to get the "hands on" skills needed to prepare a horse for private or public sale. Discussions on the economics of public sales, bookkeeping procedures, forms needed, advertising, legal responsibilities of sales companies, buyer and owner interaction and auction variations among different breeds. Prerequisites: ESCI 305, ESCI 130, ESCI 235 3 credits (1 lecture hour, 4 laboratory hours), fall semester

ESCI 345. Advanced Equine Anatomy. (2 Credits)

This course will provide a focused examination of equine anatomy as it relates to rehabilitation. Musculoskeletal anatomy will be presented in detail, as an understanding of the relevant anatomy is crucial for effective rehabilitation in horses. Skeletal structures will be presented within the context of equine biomechanics and muscles will be grouped by both function and region. Anatomical models and live horse will be utilized to provide context and hands-on study of the information presented. Prerequisites: ESCI 312 with a C or better or permission of instructor 2 credits (4 laboratory hours), fall and spring semesters

ESCI 350. Advanced Equine Aqua Therapies. (2 Credits)

This course will serve as a continuation of ESCI 335 Equine Aquatic Therapies. Students will gain additional practical experience working with the underwater treadmill, cold salt water spa, and swimming, including learning to start new horses in the equipment and working with more difficult cases. Students will learn how to assess improvement in athletic fitness and develop treatment protocols for both rehabilitation and athletic conditioning. Prerequisites: ESCI 335 2 credits (4 laboratory hours), spring semester

ESCI 360. Intro to Equine Medications. (1 Credit)

This course will introduce the major classes of medications used in the equine industry, including sedatives, antimicrobials, NSAIDs and steroids. Students will learn the physiological mechanisms behind the actions of these medications and the common usage within the industry. This course will also cover adverse effects of certain medications frequently used in the equine industry and why they develop. Prerequisite: ESCI 312 with a C or better 1 Credit (1 lecture hour)

ESCI 370. Concepts for Diagnosis. (1 Credit)

This course introduces the various diagnostic methods used to diagnose rehabilitation cases. Students will discuss lameness and neurologic evaluations as they relate to the common cases seen in equine rehabilitation. Imaging modalities and their differences will be presented to enable students to understand their role in diagnosis and evaluation throughout rehabilitation. Prerequisites: ESCI 312 with a C or better or permission of instructor 1 credits (1 lecture hour), fall and spring semesters

ESCI 380. Equine Rehab Therapies. (3 Credits)

This course will provide an instruction to the various modalities used in equine rehabilitation. Students will gain practical experience working with the therapeutic laser, therapeutic ultrasound, MagnaWave, and GameReady. The scientific basis for using these treatments will be presented and students will gain an understanding of the physiologic effects of these treatments as well as indications and contraindications for their use. Prerequisites: ESCI 345 with a B or better, ESCI 312 with a C or better or permission of instructor 3 credits (1 lecture hour, 6 laboratory hours), fall and spring semesters

ESCI 390. Current Research in Rehab. (1 Credit)

This discussion-based course focuses on current research papers related to the equine rehabilitation field. Research papers will be presented and discussed on laser therapy, acupuncture, underwater treadmill, cold therapy, therapeutic ultrasound, and various other rehabilitation modalities as well as major causes of lameness in horses. Prerequisites: ESCI 335 with a C or better and permission of instructor, Co-requisite: ESCI 380 1 credits (1 lecture hour), fall and spring semesters

ESCI 400. Adv Equine Reproduction/Mgt. (4 Credits)

This course is designed to provide an advanced level of management for breeding farm operations. It deals with the management of stallions, brood mares and foals and all related activities. A general knowledge of computers, record keeping, equine health, reproductive physiology and horse handling skills is needed prior to admittance. Prerequisites: ESCI 340, ESCI 320, ESCI 310, ESCI 225, 4 credits (1 lecture hour, 9 laboratory hours), spring semester

ESCI 401. App. Adv. Equine Specialization. (4 Credits)

This course is designed to enhance the student's skills in hunt seat, western, or draft horse training and management. Students will utilize the skills taught in ERID 300 Advanced Equine Specialization I and ERID 350 Advanced Equine Specialization II but under the direct supervision of an owner, manager, supervisor or educator. Student must submit weekly logs (below) to the instructor detailing their learning outcomes and how they achieved them that week. Log questions are provided to guide the students in providing information to their supervisor. Students will be required to give a final presentation discussing learning outcomes achieved throughout the course. This course can be taken in lieu of ERID 400 Advanced Equine Specialization III with instructors' permission and all other degree course work must be completed prior to requesting enrollment. Prerequisite of ERID 300 and ERID 350 with a B or better, permission from instructor and division chair. Internship 4 credits (12 hours per week for 15 weeks)

ESCI 405. Problems and Diseases. (2 Credits)

This course focuses on the major causes of lameness in horses and the process of diagnosing and treating them. Students will work through clinical cases in a discussion format to determine the cause of the lameness and develop treatment plans for each case. Prerequisites: ESCI 370, ESCI 335, and ESCI 380 or permission of instructor 2 credits (2 lecture hours), fall and spring semester

ESCI 410. Equine Exercise Physiology. (2 Credits)

This course will cover technology and methodology of conditioning horses used in sport. Emphasis will be placed on the state of fitness of the equine athlete and its effect on the bodily systems. Prerequisites/co-requisite: ESCI 312 and ESCI 110 all with a C or better 2 credits (2 lecture hours), spring semester

ESCI 415. Equine Rehabilitation III. (4 Credits)

This course will apply knowledge and skills developed during ESCI 325 and ESCI 365. Students will be involved with implementing physical rehabilitation programs for horses, documenting the horses' progress as well as facility maintenance, equipment operation, budget development, ordering of supplies, billing, and client communication. Students will also assist students enrolled in ESCI 325/365. Current research papers regarding physical rehabilitation will be discussed. Students will be evaluated on skills, effectiveness, leadership, work ethic, and communication skills. Presentations by students on the uses of therapies in equine rehabilitation/training will be required. Prerequisites: ESCI 365 with a B or better, and ESCI 410 with a C or better, and permission of instructor 4 credits (1 lecture hour, 9 laboratory hours), fall and spring semester

ESCI 420. Equine Internship. (15 Credits)

A supervised field work program in a selected equine field. Students will carry out a planned program of educational experiences, under the direct supervision of an owner, manager, supervisor, or educator. This Internship must be pre-approved by an internship coordinator. Students and employers must submit weekly reports and evaluations while on internship. The student will be required to submit a written report and give an oral presentation. A student must complete 15 credit hours of academic study or the equivalent of supervised work (40 hours of supervised work is equal to one credit hour). A combination of academic study and work experience totaling 15 credit hours is acceptable. An international equine exchange program is acceptable and available in fulfilling this requirement. "Visiting student" status may be granted to students enrolled in other United States equine programs who wish to pursue an international exchange program. Prerequisite: ESCI 450 Internship Orientation 15 credits, (minimum 15 weeks minimum 40 hours/week)

ESCI 430. Clinical Application. (4 Credits)

This course allows students to implement all the information gained in their previous equine rehabilitation courses in a clinical setting. Students will perform daily treatments of horses in a clinical setting. Each student will be assigned care horses, which they will be responsible for assessing daily for changes related to treatment. Students will present assigned cases during rounds each week and will provide insight into progress seen and suggest changes in treatment plans. Students will become more involved in the management of the facility and learn to use veterinary records software to monitor cases, manage inventory, etc. Prerequisites: ESCI 370, ESCI 335 with a C or better and ESCI 380 with a C or better or permission of instructor 4 credits (1 lecture hour and 9 laboratory hours), fall and spring semester

ESCI 450. Equine Sci Intern Orientation. (1 Credit)

This course is designed to prepare students for an internship and to assist them with the process of employment and career development. It prepares students for internship requirements such as goal definition, placement site identification, job application, performance evaluation and report writing. ESCI 450 formalizes internship planning and preparation to insure that internships are procured, conducted in a professional manner, follow course guidelines, and satisfy the goals and objectives of students, faculty advisors and cooperating placement sites. Students must complete ESCI 450 prior to enrolling in ESCI 420. Prerequisite: junior level or higher standing required. 1 credit - 1 lecture hour (spring semester)