

Discipline: Agriculture	Sub-discipline: Equine Science
General Course Title: <b>Farrier Science</b>	Min. Units: <b>3 Semester</b>
Proposed Suffix:	
<p>Course Description:  Horseshoeing principles and practices, including basic anatomy and physiology of the horse's limbs and feet, horseshoeing terminology, and guidelines for assessing a proper horseshoeing job. Causes, treatment and prevention of common lameness problems.</p>	
Required Prerequisites or Co-Requisites <sup>1</sup>	
Advisories/Recommended Preparation <sup>2</sup>	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> <li>• Identify all bones, major ligaments, and tendons of the front and hind limbs and explain their physiological function.</li> <li>• Diagram the internal and external parts of the hoof and analyze the function of each.</li> <li>• Analyze the motion of various horses and appraise applicable trimming or shoeing techniques for maximum horse benefit.</li> <li>• Assess a sample hoof and evaluate measures to gain proper balance.</li> <li>• Design a plan to restore proper balance of the hoof.</li> <li>• Diagnose unsoundness of hoof, appraise causes, and recommend remedies.</li> <li>• Compare and contrast the different types and fitting of a horseshoe.</li> <li>• Discuss alternatives for corrective shoeing.</li> <li>• Evaluate a horseshoeing job for balance, symmetry, and correct angles.</li> <li>• Analyze young horse potential foot problems.</li> </ul>	
<p>Course Content:</p> <ol style="list-style-type: none"> <li>1. Basic Anatomy and Physiology <ol style="list-style-type: none"> <li>A. Anatomy of front and hind limbs <ol style="list-style-type: none"> <li>1. Bones of the forelimb and hindlimb</li> <li>2. Ligaments of the forelimb and hindlimb</li> <li>3. Tendons of the forelimb and hindlimb</li> </ol> </li> <li>B. Physiology of the forelimb and hindlimb <ol style="list-style-type: none"> <li>1. Physical actions of locomotion</li> </ol> </li> <li>C. Anatomy of the Hoof <ol style="list-style-type: none"> <li>1. Terminology</li> <li>2. Internal and external parts</li> <li>3. Function of hoof parts</li> <li>4. Proper balance</li> <li>5. Diseases</li> <li>6. Effects of age, health, and conformation on the hoof</li> </ol> </li> </ol> </li> <li>2. Balance of the Hoof <ol style="list-style-type: none"> <li>A. Identifying abnormalities</li> <li>B. Designing a plan for proper balance</li> <li>C. Theory of restoring feet</li> <li>D. Correct trimming procedures</li> </ol> </li> </ol> <p><b>Farrier Science (Content Continued)</b></p> <ol style="list-style-type: none"> <li>3. Unsoundness of hoof</li> </ol>	

<sup>1</sup> Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

<sup>2</sup> Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

- A. Conformation problems
- B. Thin walls
- C. Dropped soles
- D. Remedies

4. Hoof Trimming

- A. Practices
  - 1. Proper angle, balance
  - 2. Preparation of the hoof for shoeing
  - 3. Safe and correct holding
- B. Tools
  - 1. Function
  - 2. Costs
  - 3. Identification

5. Barefoot Trimming

- A. Advantages and disadvantages
- B. Costs
- C. Skills needed

6. Horseshoeing

- A. Horseshoes
  - 1. Types
  - 2. Fitting
  - 3. Nailing
- B. Holding the horse safely and correctly for shoeing
- C. Shoeing techniques
- D. Corrective and pathological shoeing
- E. Preventative shoeing
- F. Achieving Proper Horse Motion
- G. Guidelines for assessing a proper horseshoeing job

7. Trimming and Corrective Procedures for the Young Foal

- A. Identifying problems in foals
- B. Designing procedures for correction

Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.

Methods of Evaluation: Lecture Comprehensive Quizzes and Exams Written Critical Thinking Scenarios Problem Analysis and Solution Research and Term Papers	Methods of Evaluation: Laboratory Laboratory Skill Validation by Observation Laboratory Projects and Reports Laboratory Research Projects and Reports Laboratory Skill Practicum Exams
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Typical Textbooks, Manuals, or Other Support Materials  
Horses, 3<sup>rd</sup> edition. Evans, J. Warren. W.H. Freeman & Co., 2001.  
The Principles of Horseshoeing II. Butler, Doug. Butler Pub & Tools, 1985.  
A Textbook of Horseshoeing for Horseshoers & Veterinarians. Oregon St. University Press, 1995.

**Statewide Articulation: CPSLO-ASCI 315, UCD-ANS 149, other universities as lower division elective.**

FDRG Lead Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Mark E. Bender, PhD CSU Stanislaus

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