New Undergraduate Course Approval Cover Form
Montana State University

This four-page form collects basic information about the proposed new course, provides information on the approval process, and includes all required approvals. Additional information (see INFO sheet) is also required as part of the New Course Packet.

Proposed New Course Information

Requested Rubric, Course Number, Core Designation (if needed): EQU 206

Example: PHL 361 RH

Course Title: Equine Ethology: Understanding Horse Behavior

Equine Ethology

Fall 2015

Submitted by: Shannon Moreaux, Associate Prof. A&RS
406-994-7689
Moreaux@montana.edu

Instructor: Alan Goldhahn, DVM
Animal and Range Science

College: College of Agriculture

New Course Review Process

Instructor completes the New Course Packet, with Core information if a Core designation is requested.

Instructor checks for "equivalent" course in the MUS system and recommends a common or unique course number.

Department Head's signature indicates that course has been approved by the process used within the Department.

The Chair of the College Curriculum Committee signs to indicate College academic approval.

The College Dean signs to indicate that adequate resources are available to offer the course. Supporting information (Dean's Statement) is typically required.

The New Course Packet (as PDF) is uploaded to the Provost's Office server for distribution to other committees.

Course requests are sent to Curriculum and Program Committee (CPC). Core reviews are sent to appropriate Core subcommittee. Committees work in parallel when possible to speed approval. Special topics courses (291,491) skip the CPC review (limited to two years.)

Provost's Office reviews the new course request. New courses are submitted to MUS for Common Course Number (CCN) review, Dean and Department informed upon approval.

Approved new course sent to Registrar for inclusion in the Catalog and Schedule of Classes

APPROVALS

Submitter *
Date

Department Head *
Date

Chair, College Curriculum Comm.
Date

Dean *
Date

Chair, Core Subcommittee (if app.)
Date

Chair, CPC

Assoc. Provost *
Date

Note: This diagram illustrates the typical flow path, but at any review step there can be a request for additional information or modifications. Careful review in early steps is the best way to speed the overall process. * Special topics courses (x91) require fewer signatures, but cannot be offered more than twice times without committee review.
INFORMATION NEEDED FOR COMMON COURSE NUMBERING

The process for identifying a common course number for a new course is as follows:

1. Course learning outcomes are prepared for the new course.
2. The person submitting the new course request looks at the CCN website to see a course with similar outcomes already exists in the MUS system.

   www.mus.edu/Qtools/CCN/ccn_default.asp

   • If a course exists with at least 80% of the same outcomes, the course is considered “equivalent” to the proposed new course, and the new course should use the existing rubric and course number.

   • If no “equivalent” course is found, the person submitting the new course request should identify a unique course number that has not been used by any other course in the MUS system.
3. The requested rubric and course number are submitted as part of the new course packet.
4. The Provost’s Office submits the learning outcomes and the requested rubric and course number to the MUS to have a course number assigned to the course. (This will typically be the requested course number, but it could be changed.)
5. The assigned common course number is reported back to the person submitting the new course request.

Requested Rubric, Course Number, Core Designation (if needed):

   Course Title: Equine Ethology: Understanding Horse Behavior
   Abbrev. Course Title (≤ 30 char): Equine Ethology
   Department Offering Course: Animal and Range Science
   College: College of Agriculture

   Credits:

   Is this course “equivalent” to a course in the MUS System?:
   □ Yes □ No

   Learning Outcomes for the Course:

   LEARNING OUTCOMES:

   The successful student will:

   1. Learn the anatomy of the horse brain and biochemical physiology of equine behavior.
   2. Discover the phylogenetic, ontogenetic and epigenetic effects on behavior of domestic equids.
   3. Learn how modern ecological influences effect equine behavior.
   4. Develop an understanding of equine perception and orientation.
   5. Discover how horses learn.
   6. Learn to understand the social behaviors of horses.
   7. Learn how horses communicate.
   8. Learn the behavior of horse reflexes and locomotor behavior.
   9. Learn investigative behaviors.
INFORMATION REQUIRED BY THE REGISTRAR

The data needed to enter the new course into the MSU Catalog and Schedule of Classes is collected on this page. Once the new course has been approved, this page is automatically forwarded to the Registrar for data entry.

Assigned Rubric, Course Number, Core Designation (if needed):

Course Title (for Catalog):

Course Title (for Schedule of Classes, 30 characters, max.):

First Semester to be Offered:

Restricted Entry/Consent of Instructor Required: ☑ Yes ☐ No

Instructor's GID (last 4 digits only):

Department Offering Course:

College:

Animal and Range Science

College of Agriculture

Is the requested course number available? (x4155 to check): ☑ Yes ☐ No

Frequency of course offering: ☑ Annually ☐ Alternate Years, starting ________

Semester(s) offered (check all that apply):

☐ Summer ☑ Fall ☐ Spring

Summer Options (check all that apply):

☐ First 6 weeks ☐ Second 6 weeks ☐ 12 weeks

Credits by mode of instruction:

Lecture: 3

Seminar: __________

Independent Study: __________

Lab/Studio: __________

Recitation/Discussion: __________

TOTAL CREDITS: 3

Primary Mode(s) of Delivery:

☐ Face-to-face ☑ Web-Enhanced (small on-line comp.)

☐ On-Line Only ☐ Blended (significant on-line portion)

Assigned Day(s): ☑ M ☑ Tu ☑ W ☑ Th ☐ F ☐ Sa ☐ Su

Assigned Time(s): 0925-1015

Assigned Building: ABB (Animal Bioscience Building)

Assigned Room: 238

Capacity (room capacity, or enrollment “cap”): 45

Co- and Pre-Requisites — Courses numbered 200 and above are normally expected to have prerequisites. When listing multiple prerequisites, please separate courses with “and” if both are required, or “or” if only one is required.

Prerequisite(s): ANSC 100 - Introduction to Animal Science

Co-Requisite(s):

Course Description — Provide a course description of 40 words or less for the MSU Catalog.

Equine Ethology is a course designed to teach students the science of horse behavior from an evolutionary, biologic, physiologic, ecologic and genetic perspective. This course provides students a foundation for more sensitive and informed care, management, handling.
DEAN’S STATEMENT

The reviewing committees are being asked to take a closer look at the resources required for each proposed new course. In many cases new courses will replace existing courses and the new course request is effectively resource neutral, however that is not always the case. For example, a new elective course that would result in distributing an existing student population across a larger number of courses would represent a significant increase in expenditures for the new course, and no increase in total student credit hours. A funding mechanism for such a course would need to be identified. The Dean’s Statement is the place to document how the costs of the proposed new course will be covered.
September 8, 2014

TO: Ron Larsen, Associate Provost

FR: Glenn C. Duff, Interim Dean and Director

RE: Dean’s Statement for EQUS 206 Equine Ethology

The Department of Animal and Range Sciences has requested a new undergraduate course entitled “Equine Ethology” (EQUS 206). This course has been taught the last 2 years as an experimental course. The course has been created from the investment proposal a couple years ago and has been paid for as NTT support from the department. This course has been taught by Dr. Alan Goldhahn (DVM) and Dr. Goldhahn has applied to the NTT applicant pool for the College of Agriculture.

Please let me know if you need any additional information.
TO: Ron Larsen, Associate Provost
FROM: Patrick Hatfield, Interim Department Head
RE: Department Head Statement for EQUUS 206 Equine Ethology
DATE: September 15, 2014

I am writing in support of a new undergraduate course entitled “Equine Ethology” (EQUUS 206). This course has been taught the last two years as an experimental course in the Department of Animal & Range Sciences.

Dr. Al Goldhahn has been the instructor for this course for the last two years. He is not a member of the regular faculty. Dr. Goldhahn is qualified to teach this course based on his graduate education, 25 years of equine veterinary practice experience and horse husbandry and conditioning experience in addition to past teaching experiences. Dr. Goldhahn has taught at the university level in California and this course twice previously at MSU.

Please let me know if you need any additional information in this matter.
Education:

DVM, Colorado State University, 1982
BS, Montana State University, 1977

Experience:

Instructor, 1984 – 1985, Delta College, Stockton, CA
Course: Equine Husbandry

Instructor, 2010 – 2013, Carrington College, Stockton, CA
Taught equine emphasis to veterinary technician students

Instructor, 2012, Montana State University
Taught Equus 291 Equine Ethology: Understanding Horse Behavior

Employment History:

Pioneer Equine Hospital, Oakdale, CA, January 1982 – December 1986

Alan Goldhahn, DVM, Lodi, CA, January 1987 – present
Sole proprietor equine ambulatory service

Copper Spring Ranch, Bozeman, MT, 2010 – 2011
Part Time Equine Veterinarian

Veterinary license in CA, CO, and MT
Please provide the following information in narrative format. Substantive responses to all criteria are required. Although not required, a draft syllabus can also be helpful to the committee in understanding the details of the proposed course.

General Course Information
1. Requested Public, Course Number, and Core Designation (if any)

> EQUIS 206

2. Course Title

> Equine Ethology: Understanding Horse Behavior

3. Provide a general description of the course explaining the need for the course, its goals, and its overall structure. This is the most important part of the application and should offer a good sense of what students will experience by taking this class.

> General Description and Goals:

The Provost has allocated permanent funding for equine science courses because there is a need to increase the number of disciplinary courses offered for equine option students; in particular courses steeped in fundamental biological science. Currently, students in the equine option have limited entry level science courses that focus on horses. This will be a sophomore level fundamental science course with a strategic and specific focus on equine ethology (horse behavior). Not only will this course serve as a fundamental resource for equine science students, it will be of interest to other animal science students, pre-veterinary students and biology majors.

Ethology, the scientific study of animal behavior, is a relatively new science with a significant relationship to other scientific disciplines such as neurophysiology, evolutionary biology, genetics and ecology. In recent decades equine behavior has been well studied and is now considered to be a fundamental component of equine science. Understanding horse behavior is essential to equine welfare, husbandry and training. Horse behavior has also become important relative to the novel disciplines of equine facilitated psychotherapy and physical therapy. Equine Ethology: Understanding Horse Behavior is a course designed to teach students the science of horse behavior from an evolutionary, biologic, physiologic, ecologic and genetic perspective. The study of equine behavior provides students a foundation for more sensitive and informed care, management, handling, understanding and training of horses. The goal of this course is to provide students with the principles necessary to develop an appreciation for and an understanding of the complex nature of the relationship between humans and horses and create a foundation for further exploration into the complex behaviors of the horse.

Overall Structure:
This course will be presented as a 3 credit lecture, discussion, self-inquiry series supported by multiple textbook reviews, scientific study reviews and periodic practical, applied (real, on campus) interactive applications.

4. Based on what types of student work (e.g., tests, homework assignments, papers, performances, etc.) will grades be determined?

> Student performance will be accessed using graded quizzes, exams, reading/writing assignments, attendance and participation.

5. Provide a course content outline containing all major topics plus a brief description of the material to be covered under each major topic heading.

> 1. Introduction: Influences and motivation
   • Scope of equine behavior
   • What motivates behavior?
   • Categories of behavior - reactive, active, cognitive
   • Species behavioral differences
   • Learned behavior and learning ability
   • Other influences on behavior
   • Behavioral differences between breeds
   • Related terminology

2. The biology of behavior
   • Neuroanatomy, neurochemical and neurodevelopment review
   • Perception and behavior - vision, hearing, touch, pressure, smell, taste, pain
   • Proprioception, equilibrium, orientation and homing
   • Motor patterns - reflexes and locomotor activity
   • The body language of horses
   • Fight or flight
   • Related terminology

3. Genetics (phylogenetics, ontogenetics and epigenetics) and behavior
   • Evolution review
   • Understanding the basics of phylogenetics, ontogenetics and epigenetics
   • Effects of the environment
   • The importance of innate and inherited behaviors

4. Communication and social behavior
   • Animal societies
   • Social constraints and herd membership
   • Signals of communication - chemical, tactile, visual signals
   • Social organization - home range
   • Maintenance behavior
   • Play behavior
   • Lack of equine company

5. Gender, sexual and reproductive behavior
   • Sexual strategies
   • Normal sexual behavior - stallions, mares, mating, birthing
   • Foal imprinting
   • Normal maternal behavior
   • Abnormal sexual behaviors - stallions, mares
6. Learning and training
   • Conditioning and learning
   • Shaping, extinction, habituation, instrumental learning
   • Operant and respondent behavior
   • More aspects of conditioning - pseudo-conditioning, interoceptive conditioning, temporal conditioning
   • Biological aspects of conditioning
   • Cognition and learning
   • Associative learning
   • Obedience, reinforcement, punishment
   • Reinforcement schedules
   • Flooding, Systematic desensitization, exhaustion, punishment, habituation, counter conditioning, join-up/follow-up

7. Behavioral Problems
   • Abnormal behavior
   • Types of abnormal behavior in horses
   • Diagnosing behavioral problems
   • Domestication
   • Stress
   • Stereotypes
   • Stable vices - crib biting, wind sucking, weaving etc
   • Prevention
   • Ridden vices - shying, tongue over bit, head tossing, rearing, bucking etc
   • Handling vices - leading, unwillingness to be caught, etc.
   • Transporting horses - problems during loading, horse trailer requirements

8. List required texts or other required references.


7. What are the estimated enrollment and student credit hour (SCH) production?
   (SCH = (enrollment + credits))

> Enrollment: 40 per year, Student credit hour (SCH): 120

8. Will there be an enrollment cap that restricts enrollment below the level of student demand? If so, what is the enrollment cap and why is it necessary?

> No

9. Will course be a "restricted enrollment" course? If so, why is restricted enrollment necessary?

> No

10. Describe how the success of the course will be evaluated? (“End-of-semester student evaluations” is not the answer to this question. How will the instructor determine if the learning outcomes are being met, and how will the department determine if the course is fulfilling its intended purpose?)
> How the instructor will determine if the learning outcomes are being met:

The instructor will use assessment tools developed from Merrill's "first principles" of instruction (Merrill, M. D., 2002, First principles of instruction. Educational Technology Research and Development, 50(3), 43-59.).

1. Activation - Students will be challenged to recall and demonstrate (through class discussions and writing assignments) prior knowledge and past learning or personal experiences to be applied to what should be newly learned.

2. Problem centered authentic application - Students will need to assimilate prior knowledge and past learning or personal experiences with new knowledge and will be asked to demonstrate (through class discussion, writing assignments, quizzes and exams) their level of understanding on relevant real-world tasks or problems, including a series of discussions or writing assignments that progress from explaining basic behavior diagnosing a complex behavioral abnormality.

3. Demonstration – greater learning is achieved and demonstrated when new knowledge is provided in the context of real-world issues. The knowledge is enhanced when it adheres to research-based principles of learning. Assigned research and writing experiences in this course satisfies this principle of instruction and allows the instructor to evaluate the depth of learning.

4. Application - Students learn more when they apply old and new knowledge and past learning or personal experiences to solve real-world issues and receive feedback and guidance during the application. Assigned research and writing experiences in conjunction with field trip activities will allow students to demonstrate the level at which the course learning outcomes are being met.

5. Integration - Students learn more when they are encouraged to integrate their new knowledge through reflection, discussion, debate, and/or presentation of new knowledge. Students in this course will be asked to regularly reflect on their own performance on quizzes, exams and writing assignments, discuss reading assignments and supplemental reading material and lecture material, debate the topics of discussion, and demonstrate their level of understanding by explaining timely topics during class or on experiential learning trips.

> How the department will determine if the course is fulfilling its intended purpose:

This course will be a prerequisite for other upper level equine science courses. Student performance in these courses will be the gauge for evaluated effectiveness of the instructor and course design for this course – EQUS 206 Equine Ethology. Additionally, the department will use graduating student exit interviews, post-graduation alumni interviews, internship cooperator interviews and evaluations, and advisory committee feedback to determine if this course is contributing to preparing students for careers in the equine industry.
The instructor for this proposed course is not a member of the regular faculty. The instructor is qualified to teach this course based on education, 25 years of equine veterinary practice and horse husbandry experience and past teaching experiences. The instructor has taught this course previously. Please see attached Vita and letter of support.

Level of Offering
12. Has the course been offered previously under 280/291 or 480/491? If so, when? Under what number? What was the enrollment? What level of students took the course?

> This course was offered previously as EQUS 291 in Fall 2012 and 2013. The enrollment averaged 12 students from various majors and various and various ranks.

13. Justify the level of course offering.

> This course is being offered at the sophomore level as a foundational equine science course which builds upon the introductory information taught in the pre-requisite – Introduction to Animal Science. This course will prepare students for upper level major requirements and electives. Specifically this course will serve as a partial foundation for: Equine Reproduction, Equine Form and Function, Equine Nutrition, Equitation Instruction, Colt Starting and Advanced Horse Training Techniques.

Relationship to other Courses, Curricula, and Departments
14. Does this course build on or interrelate with other courses in your curriculum or related curricula? If so, which ones?

> This is a foundational course.

15. Do the topics in the proposed course duplicate or reiterate those in other courses in this or any other department? If so, how do the coverage and educational experience differ and how is this duplication or reiteration justified? Also, what liaison (which is expected in cases of apparent overlap) has been conducted with other departments? Report reactions, both favorable and unfavorable.

> The topics in this proposed course do not duplicate or reiterate those in other courses in this or any other department.

16. What programs (departments, colleges) will be impacted by the SCH production of this course? That is, where do you think the SCH in the proposed course are likely to come from? If the expected SCH production of the proposed course is greater than 1000, and the SCH are expected to come from other colleges, what steps have been taken to make the other units aware of the potential loss of SCH? Report reactions, both favorable and unfavorable.
The animal science programs in the Department of Animal and Range Science (A&RS) in the College of Agriculture will be impacted by the SCH production of this course.

If this proposed course has a significant interdisciplinary component, please explain briefly. Otherwise, indicate N/A.

Students Served

Does the proposed course serve majors only? Non-majors only? Both majors and non-majors? What other majors might be interested in this course? State areas or disciplines to be served and indicate the specific efforts that will be made to make the course material relevant to all disciplines served.

The proposed course would serve all three animal science major options (science, livestock and equine), pre-veterinary students and potentially biological science options.

Resources

What additional resources (e.g., additional instructional FTE, required technologies), if any, will be required to offer this course? Are there any resource issues for the students who will take the course (e.g., required technologies, travel, on-line access requirements)? Will there be an additional fee charged to students taking this course? Please explain.

The instructional FTE for teaching this course has been permanently allocated. There are no additional resource requirements for the students who will take the course and no fee will be charged.

What existing information resources – print (books, journals, documents), audiovisual (videos, DVDs, CDs or other), and/or electronic (e-books, databases, electronic journals and web sites) – provided by the MSU Libraries will be used by students in this course? Provide examples as well as descriptive information. If additional information resources are necessary, please discuss those acquisitions with the library (A6549 Collection Development) at least three months prior to the beginning of the semester in which this course will be taught.

No existing information resources provided by the MSU Libraries will be used by students in this course. Supplemental resources are available from the instructor or on the World Wide Web.

Other Supporting Material

Include any additional information you feel is needed to support this request.

The Equine Science Program has been the fastest growing program in the Animal and Range Science Department since its inception in 2008. The curriculum has been upgraded to increase the rigor and substance to address the needs of a changing equine industry. The Provost allocated permanent funding for additional courses in the Equine Program based on the substantial growth and success. This course will be a required course in the newly re-organized and redeveloped Equine Option. The Equine Curriculum Committee, the Animal and Range Science Department Curriculum Committee, the Department Head and the College of Agriculture Dean support the changes and additional courses.