EQSCI 161 Course Outline as of Spring 2012

CATALOG INFORMATION

Dept and Nbr: EQSCI 161 Title: EQUINE FAC WATER QUALITY
Full Title: Equine Facilities Water Quality Planning
Last Reviewed: 11/7/2011

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.50	Lecture Scheduled	1.50	17.5	Lecture Scheduled	26.25
Minimum	1.50	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	1.50		Contact Total	26.25
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 52.50 Total Student Learning Hours: 78.75

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	AG 280.78

Catalog Description:
This course is designed to provide those involved with equine science and equine businesses with information about good horse keeping management practices to reduce potential pollution problems. Includes water quality, erosion control, environmentally safe manure management methods, and ranch planning.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: This course is designed to provide those involved with equine science and equine businesses with information about good horse keeping management practices to reduce potential pollution problems. Includes water quality, erosion control, environmentally safe manure management methods, and ranch planning. (Grade or P/NP)
Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Outcomes and Objectives:
Upon completion of this course, the student will be able to:
1. Safeguard surface and groundwater as part of horse keeping.
2. Develop a conservation plan for a horse keeping property.
3. Evaluate features and activities at horse keeping facilities that are common sources of water quality concerns.
4. Discuss conservation measures that provide practical, effective, and economical means to prevent or reduce water pollution.
5. Discuss conservation measures that effectively reduce sources of water pollution at horse facilities.
6. Monitor water quality conditions.
7. Recommend erosion control methods.
8. Identify and utilize appropriate resources and publications.

Topics and Scope:

I. Keeping Horses and Protecting Ground Water
    A. Protecting surface water and ground water quality
    B. Stewardship objectives
    C. Planning conservation improvements on a property
II. Evaluating a Horse Keeping Facility
    A. Roof runoff
    B. High use areas
    C. Manure management
    D. Composting horse manure
    E. Horse wash areas
    F. Pasture management
    G. Water resources

H. Creeks
I. Springs and wells
1. Managing septic systems
2. Design and maintenance for roads, trails and stream crossings
3. Construction management

III. Conservation Measures to Improve Water Quality
A. Erosion control measures
1. Seed and mulch for effective revegetation
2. Gully repair
3. Stream bank stabilization
4. Emergency erosion control measures
a. Sandbags
b. Straw bale water bars
c. Straw bale sediment barriers
d. Straw bale check dam
e. Silt fences
f. Sandbag pipeline drop inlet
B. Storm water management measures: Keep "clean" water clean
1. Runoff collection
a. Gutters
b. Downspouts
c. Splash pads
d. Diversions
e. Berms
2. Runoff diversion
3. Runoff conveyance
a. Grassed waterway
b. Lined waterways
c. Drop inlets
d. Sediment basin
e. Underground pipelines
4. Discharge area
C. Measures to manage "Polluted" water
1. Filter strip
2. Energy dissipates
3. Riparian buffer
4. Willow sprigging
5. Constructed wetland
6. Waste pond

IV. Resources and Publications
V. Field Trip - Demonstration Location

Assignment:

1. Reading, 10 - 30 pages per week
2. Research paper (3-5 pages) on a current water quality issue related to equine facilities
3. Field trip to a horse keeping facility and field report (3-5 pages) evaluating conditions affecting water quality, making recommendations for improvement, and specifying management strategies for clean water
4. Conservation plan
5. Final exam

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Research paper; field report; conservation plan.	Writing 20 - 40%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Evaluative field report.	Problem solving 20 - 40%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Final exam: Multiple choice, True/false, Matching items, Completion, Short answer.	Exams 20 - 40%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Marin Coastal Watershed Enhancement Projects - Ranch Plan Workbook, second edition, June 1997.
Horse Keeping: A Guide to Land Management for Clean Water. Council of Bay Area Resource Conservation Districts in partnership with the USDA Natural Resources Conservation Service, 2001.
Instructor prepared materials