Texas A&M University-Commerce  
Department of Agricultural Sciences  
Spring 2013

Instructor: Dustin Perry  
dkperry@iastate.edu or dperry@leomail.tamuc.edu  
214-454-2399 (Cell – call or text)

Course: AMC 423 Natural Resources Management

Time: This course is web-based and is divided into 8 modules. Students will have two weeks to complete each module. It is estimated that the average time of online access for the completion of each of these modules, not including reflection and research, is approximately 4-5 hours. The student should be willing to commit and equal amount of time to the review and reflection of concepts presented in each module.

No Text: No text required. However, students will have to access and print or download reports, bulletins, and other publications from the Internet. Students may have to download the latest version of some software including Adobe Acrobat Reader, Window Media Player, Microsoft Office and QuickTime in order to access course resources. If students experience difficulties with specific technology requirements, IT Support Services can be reached at 903-468-6000 or helpdesk@tamuc.edu.

Rationale: This course deals with a variety of issues related to the management of renewable natural resources and the impact of agricultural enterprises on the environment. Among the major concepts included are renewable natural resource conservation, water protection, and appropriate land use. The course will utilize ecological and sustainable perspectives, where applicable.

Course concepts will emphasize these themes:
- Perspectives of Ecology, Conservation, and Sustainability
- Soil and Water Conservation and Protection
- Livestock and Poultry Waste Management
- Wildlife, Timber, and Farm Pond Management
- Regulations, Permits, and Governmental Agencies

Each module will include: an overview, brief introductory notes/lecture, links to course elements for review (reading, if print or viewing, if multimedia). Modules will include a quiz, discussion, and/or reflection assignment. A final exam will be included.

Course Objectives: Upon completion of this course the student will be able to:

1. Describe examples of how production agriculture impacts the environment.
2. Compare various perspectives of natural resources management.
3. Describe the environmental, economic, social, and regulatory issues that influence NRM perspectives.
4. Recognize the interrelationships of organism within the ecosystem.
5. Understand the levels of ecological development.
6. Interpret illustrations of nutrient cycles.
7. Describe factors contributing to soil erosion.
8. Define components and characteristics of soils.
9. Recognize signs and types of soil erosion.
10. Identify erosion prevention practices.
11. Match land capability classes with appropriate production type or land use.
12. Identify factors contributing to watershed degradation.
13. Describe management practices used to prevent watershed degradation.
14. Utilize web-based resources to identify characteristics and conditions of an assigned watershed.
15. Explain the difference between sustainable agriculture, traditional or commercial agriculture, and organic farming.
16. Describe the factors contributing to the concept of sustainability in agricultural context.
17. Identify production practices and management strategies associated with sustainable agriculture.
18. Discuss the social and economic considerations related to sustainable agriculture.
19. Describe basic concepts of forest management.
20. Recognize relationships between forest management and wildlife habitat.
22. Describe the basic concepts of Integrated Pest Management (IPM).
23. Recognize universal strategies applied to IPM decisions.
24. Discuss advantages and disadvantages of the IPM approach.
25. Explain the concept of stewardship as applied to soil management and watershed protection.
26. Discuss the potential and problems of using various types of livestock, poultry, and human waste for soil improvement.
27. Identify the major components of a Nutrient Management Plan
28. Discuss limitations and restrictions related to beneficial land use permits.
29. List government agencies involved in environment regulation and resource conservation.
30. Interpret research and agency bulletins related to conservation and environmental protection.
31. Locate sources of technical and financial assistance for implementing conservation practices.

**Grade Determination:**

- Online discussion (at least two entries per module/topic) 80
- Quizzes (8 at 20 points each) 160
- Article Summaries (8 at 20 points each) 160
- Module 1 Assignment - Viewing Both Sides of the Topic 100
Module 2 Assignment – Ecosystems 100
Module 3 Assignment – Web Soil Survey Report 100
Module 4 Assignment – Watershed Report 100
Module 5 Assignment – Perspectives Essay 100
Module 6 Assignment – Case Study 100
Module 7 Assignment – Presentation 100
Final Exam 100
Total Possible Points 1200

Final Grade = Your total points earned = __________
Total Possible Points 1200

(A = 90 or above, B = 80-89, C = 70-79, D = 60-69, F = below 60)

Monitoring of Online Participation

Students are expected to log in and participate daily to the discussion and activities related to each module. The course software, eCollege, records the amount of active time students are logged in to the course.

Online Discussion

Each student is expected to participate in online discussion for each module. Participation is defined as the posing of, or responding to, questions or comments that offer meaningful contribution to the module topic or related prompt. Phrases such as, “I agree with Jim…” or “That’s not what I thought…” will have zero point value. The instructor will determine whether or not the each online discussion is a meaningful contribution to the topic. The student is expected to contribute to the discussion for each module. One response to the initial post plus one response to another student’s response is required for full credit.

Article Summaries

Each student will write a one to two page (double spaced, 12 point font, Times New Roman) summary over a current article that addresses the specific module topic. Citations should follow APA 6th edition guidelines. Further explanation of this assignment can be found within each module. The rubric for this assignment is listed below:

- Professionalism of submission (proper grammar, punctuation, etc.) 5 points
- Proper citation of source 5 points
- Content 10 points
- Total 20 points
Module 1 Assignment – Viewing Both Sides of the Topic

Scenario: You have lived in Rural Town, Texas for all of your life. It is a traditional row-crop farming community that has recently begun to draw in a more urban crowd due to its relatively close proximity to new jobs only a short commute away. With this new influx of inhabitants also comes a new spectrum of ideals concerning the impact of farming on surrounding areas. Many of these new inhabitants hold the belief that farming, as it is currently practiced, is detrimental to the environment. They are so concerned about the way things are going that they decide to hold a city council meeting to discuss future solutions to the “issues” at hand.

Assignment: You are to compose a two page (double spaced, 12 point, Times New Roman) response detailing whether or not you would side with the traditional farming citizens or the new environmentally concerned citizens and justify your stance for doing so. Be sure to address the following:

1. Which of the two groups would you side with and why?
2. What are some of the positive environmental impacts of row-crop production?
3. What are some potential negative environmental impacts of row-crop production?
4. What action could be taken to appease both groups?

In order to fully answer the questions, some outside research may be required. Feel free to explore the resource links provided at the end of the Module 1 Lecture page as well as resources available through the Texas A&M University – Commerce Library.

Professionalism of submission (proper grammar, punctuation, etc.) 15 points
Introduction that provides direction of paper 10 points
Content (answers the questions identified above) 60 points
Conclusion/Summary that ties in main points 10 points
Proper Citations 5 points
Total 100 Points

Module 2 Assignment - Ecosystems

Module 2 primarily deals with ecosystems and the interactions found within them. For this assignment you will create a visual display of an ecosystem and a one page (double-spaced, 12 point, Times New Roman) description of what you illustrated. From the module, you should now know that ecosystems can be as large as the earth or as small as a pond. You get the opportunity to select whatever size of an ecosystem you would like for this assignment. The specific requirements are as follows:

1. A one page, labeled illustration (created by you, not a copied image from the internet) of the ecosystem you select.
2. A one page written description of the illustration.
3. Identify the non-exhaustible resources in the ecosystem.
4. Identify the exhaustible resources in the ecosystem.
5. Identify the renewable resources in the ecosystem.
6. Identify the non-renewable resources in the ecosystem.

The manner in which you illustrate the ecosystem is up to you. You can create an image using PowerPoint, MS Word, Paint, etc. You can also hand draw the image and convert it into a PDF if you have the capability. You will not be graded on your artistic ability. However, the content is weighted heavily. The grade detail is as follows.

1. Illustration is labeled, neat, and adequate .......................... 40 points
2. Identified the non-exhaustible resources in the ecosystem .......... 10 points
3. Identified the exhaustible resources in the ecosystem .............. 10 points
4. Identified the renewable resources in the ecosystem .............. 10 points
5. Identified the non-renewable resources in the ecosystem .......... 10 points
6. One page description that further elaborates on the illustration ... 20 points

Total ................................................. 100 Points

Module 3 Assignment – Web Soil Survey Report

The Web Soil Survey (WSS) is an invaluable resource that allows anyone to obtain soil characteristics of a specified land area. It can be somewhat difficult to navigate at first, but with a little work you should be able to figure it out. When it comes to identifying an Area of Interest (AOI), be specific. Do not simply obtain the information from an entire county. Access the WSS from the Internet link in the lecture (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm) and obtain the following information:

1. Soil map with land characteristics, ecological information, and other information of your choice for an Area of Interest (AOI) which you define. Ideally, this would be property of specific interest to you (like your home or a portion of the university farm).

2. Submit the completed print out to Dropbox. You may have to save as a PDF first.

Module 4 Assignment – Watershed Report

The student will review various sources of information related to a Texas watershed and complete a one page report regarding water quality and potential threats from point source and non-point source pollution. Further details outlining this assignment can be found online in the course module.

Module 5 Assignment – Perspectives Essay

Compose a 2-3 page (double spaced, 12 point, Times New Roman) essay which reflects your perspective of the critical issues, concerns, and practices discussed and presented during the first four modules. The essay should clearly reflect the “pros” and “cons”
associated with these issues, concerns, and practices but may be organized in the way you best feel represents your perspective. Cutting and pasting is prohibited.

Professionalism of submission (proper grammar, punctuation, etc.) 15 points
Proper Citations 5 points
Introduction that provides direction of paper 10 points
Content 60 points
Conclusion/Summary that ties in main points 10 points
Total 100 Points

Module 6 Assignment – Case Study

Students will be presented a scenario (actual or hypothetical) regarding an application for a beneficial land use permit to apply livestock, poultry, or human waste to farm land. A critical analysis of the application documents will be included as well as the potential impact on the environment. Each student will answer a series of questions and draft a letter to the appropriate agency in support or rejection of the application, based on the information provided.

Module 7 Assignment – Presentation

Create a PowerPoint presentation over a Best Management Practice for protection against non-point source pollution from agricultural enterprises, a technology/incentive program used to implement conservation of renewable natural resources, practical application of Integrated Pest Management, or an emerging issue in natural resources management/environmental protection. Develop a presentation from information obtained from two or more technical bulletins or reports from a governmental agency (AgriLife, NRCS, TCEQ, EPA, TPWD, etc.) or a research report from a university. A copy of the bulletins or reports must be presented to the instructor at least three days prior to the presentation. Presentations will be posted online and be available to class peers for questions and comments. The presentations should be at least 14 slides (do not copy and paste in paragraph form on the slides) including intro slide.

Final Exam

The final exam will be a comprehensive assessment of the student’s understanding of the issues and practices associated with the management of renewable natural resources. It will consist of multiple-choice, true-false, matching, and limited (brief) response essay items.

Academic Misconduct:

Academic Misconduct in any form is in violation of Texas A&M University – Commerce Student Disciplinary Regulations and will not be tolerated. This includes, but is not limited to: copying or sharing answers on tests or assignments, plagiarism, and having someone else do your academic work. Depending on the act, a student could receive an F
grade on the test/assignment, F grade for the course, and could be suspended or expelled from the University.

NOTE:

Requests from students with disabilities for reasonable accommodations must go through the Academic Support Committee. For more information, contact Disability Services at 903-886-5150.

The instructor reserves the right to modify this syllabus during the semester, if needed. The instructor also reserves the right to extend credit for alternative assignments, projects, or presentations.

<table>
<thead>
<tr>
<th>Module Number</th>
<th>Open Date</th>
<th>Close Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>January 14, 2013 – 6:00 AM</td>
<td>January 25, 2013 – 12:00 AM</td>
</tr>
<tr>
<td>2</td>
<td>January 28, 2013 – 6:00 AM</td>
<td>February 8, 2013 – 12:00 AM</td>
</tr>
<tr>
<td>3</td>
<td>February 11, 2013 – 6:00 AM</td>
<td>February 22, 2013 – 12:00 AM</td>
</tr>
<tr>
<td>4</td>
<td>February 25, 2013 – 6:00 AM</td>
<td>March 8, 2013 – 12:00 AM</td>
</tr>
<tr>
<td>5</td>
<td>March 18, 2013 – 6:00 AM</td>
<td>March 29, 2013 – 12:00 AM</td>
</tr>
<tr>
<td>6</td>
<td>April 1, 2013 – 6:00 AM</td>
<td>April 12, 2013 – 12:00 AM</td>
</tr>
<tr>
<td>7</td>
<td>April 15, 2013 – 6:00 AM</td>
<td>April 26, 2013 – 12:00 AM</td>
</tr>
<tr>
<td>8</td>
<td>April 29, 2013 – 6:00 AM</td>
<td>May 3, 2013 – 12:00 AM</td>
</tr>
<tr>
<td>Final Exam</td>
<td>May 4, 2013 – 6:00 AM</td>
<td>May 7, 2013 – 12:00 AM</td>
</tr>
</tbody>
</table>

Note: All assignments, articles, discussions and quizzes within each module will have the same due dates as the respective closing date of the module.