**Course Title:** ESCI 4490 - Environmental Site Assessment  
4 sem. hrs. (3:2)

Levels: Undergraduate/Graduate  
Schedule Types: Lecture, Discussion, & Laboratory  
Semester: Fall 2013

Instructor: H.A. Tony Wood  
E-mail: tony.wood@tamucc.edu  
Phone: 361-825-3335  
Room Assignment: Center for Sciences, 115.  
Class usually meets @ NRC 1101

Office: NRC 1105

Class Hours: Tues 5:30-8:00

Office: NRC 1105  
Office Hours: 5-6 Thursday or by Appointment  
Phone: 825-3063  
Faculty: H.A. Tony Wood

**Course Description:** This course offers an interdisciplinary review of environmental regulations, natural environmental conditions, industrial and pollution history, and the principles of environmental risk assessment as applied to the evaluation of specific parcels of real property. Knowledge of United States environmental regulations assumed; ESCI 4301 or ESCI 5302 recommended.

Laboratory sessions will include the actual development of a Phase I Environmental Site Assessment using the USEPA All appropriate Inquiry or the equivalent ASTM E1527 - 05 Standard Practice for Environmental Site Assessments processes.


**Prerequisites:** Approval by advisor.

**Student Learning Outcomes:** Successful participation and study in this course will enable students to:
1. Understand the potential liabilities associated with environmental pollution.
2. Understand the regulatory requirements for environmental site assessments.
3. Demonstrate how to locate and interpret environmental information pertinent to a specific site.
4. Know the qualifications required to become an environmental professional by USEPA definition.

Course Requirements:

1. Regular class attendance is expected. Students who must miss a class are responsible for obtaining notes and instructions or assignments from other class members.

2. The textbook will be required reading. One or more chapters of the textbook will be discussed each week of the course. Reading and comprehension of the chapter(s) before each classroom session is expected.

3. One or more websites will be assigned for review each week. These websites should be reviewed and the student should be prepared to discuss them prior to the next class session.

4. There will be three take-home essay or PowerPoint assignments. Each will be due during the next class period unless otherwise specified. These assignments will not be accepted after the due date resulting in a zero score for that assignment.

5. One examination will be given during the semester. Students are expected to complete the exam on the scheduled exam date. Students with an excused absence from the professor must make up the exam. Exam grades will be reduced by 2 points per day. A different and potentially more difficult exam will be given from the regular class exam.

6. Student may work with a consulting firm, regulatory agency, realtor, bank, law firm, or industrial/commercial organization on an environmental assessment project. Students without an affiliated sponsoring organization will work on a project site identified by the instructor. Specifics of each project will be negotiated between the student, the instructor, and the supervising organization’s representative.

7. Each student is required to write an Environmental Site Assessment (ESA) paper based on their work with their assigned agency or organization during the semester. The report must also include a cover page, an executive summary, and a list of sources. The paper will be due by December 3, 2013. Late papers and papers not meeting minimum requirements will receive less than full credit. Papers will not be accepted after December 10, 2013. GRADUATE STUDENTS will be required to develop a presentation on their ESA and deliver it to the class during the last two classes of the semester or during the period scheduled for the final exam.

8. The course may include guest speakers during the semester representing a variety of
expertise and experience in environmental issues. Students will be responsible for material covered by these speakers and it may be included on the exam.

General Information:

Students With Special Needs: The Environmental Science Program complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. If you suspect that you may have a qualifying disability (physical impairment, learning disability, psychiatric disability, etc.), please contact the Services for Students with Disabilities Office (located in Driftwood 101) at 361-825-5816. Contacting this office in a timely fashion will allow them time to review requests and requirements and prepare appropriate accommodations. Qualified students requiring disability accommodations in this class should advise the instructor and present the accommodation letter from TAMU-CC Services for Students with Disabilities Office as soon as possible.

Evaluation Criteria:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>ESA Paper</td>
<td>40%</td>
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<tr>
<td>Class Discussions Participation</td>
<td>10%</td>
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<tr>
<td>Take-home Assignments (3)</td>
<td>15%</td>
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<tr>
<td>Exam</td>
<td>35%</td>
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Course Outline:

TOPICS AND TENTIVIVE SCHEDULE

Week 1
- Overview of textbook
- Introductions & expectations
- Overview of the course and the reasons for environmental assessments
- How ESA Reports should be organized
- The Importance of the Executive Summary
- Read Chapter 1 & 2 for next week
- Review USEPA websites on ESAs & Brownfields for next week

Week 2
- Environmental pollution liabilities
- Standards of practice
- Brownfields
- Historic Overview
- Special focus pollutants and contaminants
- Site selections
- Read Chapter 3 for next week
- Review the USEPA All appropriate Inquiry and ASTM E1527 websites for next week
- Assignment #1: Identify a brownfield or historic site in Texas with contamination from a source more than 60 years old and write a 2-3 page essay about it.

Week 3
- Initiating the ESA
- Information gathering (both ways)
- Mapping
- Title searches
- Read Chapter 4 for next week
- Visit a commercial environmental data search resource for next week
- Assignment #2: Develop a set of historical maps and images for your ESA site

Week 4
- Assessing the physical setting
- Geologic
- Hydrologic
- Read Chapter 5 for next week

Week 5
- Historic uses of the property & surrounding areas
- Read Chapter 6 for next week

Week 6
- Regulatory agency resources & data
- Read Chapter 7 for next week
- Assignment #3: Prepare a report or a PowerPoint on the Physical Setting of your ESA site

Week 7
- Visual inspections of the property
- Indications of possible environmental issues
- Reviewing surrounding properties
- Prepare for the only course exam next week
- Read Chapter 8 for next week

Week 8
- Conducting ESA interviews
- Exam (Only exam in this course)
- Read Chapter 9 for next week
- Assignment #4: Research & prepare a PowerPoint presentation on a topic from Ch. 9 or 10

Week 9
- Building materials & special building hazards
- Read Chapter 10 for next week
- Presentations of Ch.9-10 Power Points
Week 10
- Industrial & Commercial Activities
- Read Chapter 11 & 12 for next week
- Presentations of Ch.9-10 Power Points

Week 11
- Special Resource Issues
- Developing the Phase 1 ESA
- Reasons for Phase 2+ ESAs
- ESA Report Expectations

Week 12
- Environmental Site Assessments Due
- Presentation of individual Graduate ESAs

Week 13
- Presentation of individual Graduate ESAs