SYLLABUS
ENV 415: ENVIRONMENTAL ASSESSMENT AND MANAGEMENT

INSTRUCTOR: Jason Paul, Division of Environmental Science.
INSTRUCTOR OFFICE HOURS: 1:00 to 4:00 pm on M,W or By Appointment;
Office: Forestry Room 122
INSTRUCTOR PHONE NO: Office = 468-3812; E-MAIL = pauljason@sfasu.edu

COURSE MEETING TIMES: Lecture: 9:30 to 10:45 Tuesday and Thursday;
Laboratory 12:00 to 2:50 Friday*

CATALOG COURSE DESCRIPTION: Three semester hours, two hours lecture and three hours lab per week. This course focuses on environmental management and planning in the United States with reference to the principles and procedures for preparing assessments associated with “All Appropriate Inquiry” and characterization and delineation of contaminated sites. Senior standing or permission of instructor.

PREREQUISITE: Seniors Only. If you have not successfully completed (minimum “C” grade) FOR 209/BIO 313, ENV 210, ENV 349, GIS 224, GIS 390, you should drop this course and complete these sophomore and junior-level courses before enrolling in ENVR 4315. If you have successfully completed BLW 478, ENV 402, ENV 403, ENV 412, ENV 420 and ENV 450, information from these courses will be useful in developing the required environmental assessment document that meets high expectations.

TEXTBOOK: There is no required textbook. Students will be responsible for content in assigned handouts.

PROGRAM LEARNING OUTCOMES:

<table>
<thead>
<tr>
<th>B.S. Environmental Science Program Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proficiency Levels</strong></td>
</tr>
<tr>
<td><strong>Course</strong></td>
</tr>
<tr>
<td>ENV 415</td>
</tr>
</tbody>
</table>

N/A – Not Applicable  B-Basic  I-Intermediate  A-Advanced  M-Mastery

STUDENT LEARNING OUTCOMES:
A. Describe the principles and procedures for preparing environmental site assessments and environmental impact statements (All PLOs).
B. Introduce techniques for the assessment of various environmental variables (PLO1).
C. Describe the application of environmental rules and regulations to regulated entities (PLO3).
LECTURE OUTLINE and PERCENT OF SEMESTER ON SUBJECT:

The instructors reserve the right to change topics in order to incorporate new information germane to the course. The percent of time during the semester spent on each topic may change to accommodate pace of instruction.

Week 1 -4  Phase I ESA
- Desktop Evaluation and Public Records Search Methods
- All Appropriate Inquiry
- Risk Evaluation and Identification of RECs

Week 5  ISO 14000, Due Diligence and Environmental Auditing

Exam 1 – Phase I ESA and Environmental Audits

Week 6 to 11  Phase II ESA/ Affected Property Assessment
- Producing a Ground Water Table Map
  - Using GIS and Comparison with Analytical Data to Create Isocontour Contaminant Plume Maps
- Risk Characterization and Utilization of Protective Concentration Limits
- Determining Routes of Exposure
- Characterization of Residential vs. Commercial Property
- Darcy Velocity and Determination of Well Yield, Storativity, Hydraulic Conductivity
- Groundwater Classification

Weeks 12 to 13  Hazardous Waste Management
- RCRA
- CERCLA
- FIFRA

Exam 2 – Affected Property Assessment and Hazardous Waste Management

Week 14  Water Quality
- Section 319 Programs (Non-point source control)
- Total Maximum Daily Loads
- Municipal and Industrial Wastewater Treatment

Week 15  NEPA

Week 16  Environmental Ethics and Justice

Water Quality Information, NEPA, Ethics and Justice will be included on Final Examination

LABORATORY: The laboratory will primarily serve as an independent study period to be used for completion of the Phase I (See Below). There will however be mandatory meeting for labs once the Phase II ESA begins, otherwise, your project will not be completed on time. The Instructor will also be available during lab period and may also hold sessions to serve as tutorials for Phase I and Phase II ESA preparation. There will also be sampling and analysis of water from the Ag Pond. Data gathered from the analysis will be implemented within the mock Phase II ESA. Details on this will be provided in further detail later during the semester. Students will be notified in advance, if additional scheduled laboratories will occur.
Environmental Site Assessment Reports
The **Phase I Environmental Site Assessment** (ESA) report is an individual writing assignment and is heavily dependent on desktop evaluation and public records search. You may utilize the library, County, State, and Federal recordbases. This will be a mock Phase I following the requirements of ASTM E1527-13 with some modifications as appropriate due to real world site access restrictions.

**Three-person teams** will be selected to complete data collection and the mock **Phase II ESA**. The instructor will choose the teams. The proposed project site will be determined by the instructor. Field equipment needed to conduct environmental sampling can be checked out from the ATCOFA equipment room, the GIS Lab, and field sampling equipment and laboratory analysis will be coordinated through the instructor. **Each team shall work independently on field data collection and report preparation. Each team must have their field assessment approach approved before they can begin data collection.**

Each team should reference published ESAs available in public domain online in order to gain an understanding of report format and content. There will be an example Phase I ESA posted to D2L. Some or all of the skills you have learned in previous courses may be applicable to this assignment (Ecology, Soils, GIS and Mapping, Env. Measurements, Hydrology). Thoroughness of Content and Professional Presentation will be important considerations in determining the grade on your document. On the date(s) assigned in the Grading section, each team shall make a 20 minute PowerPoint presentation on the methods and results of their Phase II ESA. **At that time, each team will turn in two bound copies of their ESA and will be required to provide a digital (pdf) copy of their document.**

**COURSE POLICIES:**
**Attendance:** Lecture and scheduled laboratory attendance is mandatory. Lectures and scheduled laboratories will start promptly at the assigned time. Tardiness will not be tolerated and may result in you being locked-out of the room and counted as absent. If you have a legitimate reason for being persistently tardy, discuss the issue with the professor. If lectures or laboratories are missed because of a university recognized excused absence, it will be the responsibility of the student to notify the professor and, if necessary, provide appropriate documentation before assistance will be provided on missed information. **For lectures only,** students will be allowed only two unexcused absences for the semester. Each additional unexcused absence will result in a 5 percent point reduction for each occurrence from the final point total. Refer to the SFASU Policy Manual for details. [http://www.sfasu.edu/policies/class_attendance_excused_abs.asp](http://www.sfasu.edu/policies/class_attendance_excused_abs.asp)

**Acceptable Student Behavior:** Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the iCare Program: [http://www.sfasu.edu/judicial/earlyalert.asp](http://www.sfasu.edu/judicial/earlyalert.asp). This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.
Responsible use of technology: It is expected that all students will only use cell phones, PDAs, laptop computers, MP3 players and other technology outside of class time or when appropriate in class. Answering a cell phone, texting, listening to music or using a laptop for matters unrelated to the course may be grounds for dismissal from class or other penalties.

Cell phones (including text messaging): The use of a cell phone, including text messaging, will not be tolerated in the classroom or during a scheduled laboratory. Make sure that cell phones are turned-off and stowed before entering the classroom. If a cell phone rings during a lecture or laboratory, or I observe the use of text messaging, I will deduct ten (10) points from the offending student's total point score for each occurrence. The use of cell phones during an exam will be considered cheating. See Course Policy Below.

Cheating, Plagiarism, Unprofessional Behavior: Cheating and Plagiarism will not be tolerated. The severest penalty (F for the course) will be awarded if caught cheating or plagiarizing. An excerpt from the SFASU Policy and Procedures Manual below contains further details.

"It is the responsibility of the student to abstain from cheating. Dishonesty of any kind with respect to examinations, written assignments [completed] in or out of class, alteration of records, or illegal possession of current examinations or keys to examinations shall be considered cheating. . . Courtesy and honesty require that any ideas or materials borrowed from another must be fully acknowledged. Offering the work of another as one’s own is plagiarism. The subject matter of ideas thus taken from another may range from a few sentences or paragraphs to entire articles copied from books, periodicals, or the writing of other students. The offering of materials assembled or collected by others in the form of projects or collections without acknowledgment is also considered plagiarism. Any student who fails to give credit for ideas or materials taken from another is guilty of plagiarism." A full description on the university policy on academic dishonesty can be found on-line:
http://www.sfasu.edu/policies/student_academic_dishonesty.pdf

Grading:
1. One, 1-hour midterm exam 100 points
2. Comprehensive Final Exam 150 points
3. Phase I ESA and Phase II ESA (200 points each) 400 points
   A. Phase I ESA Due February 27
   B. Phase II ESA and Presentation Due April 30
4. Team Presentation 50 points

Total Points Available in Course 700 points
*Pond sampling and analysis may be included as an additional grade (up to 50 pts.) pending ATCOFA approval and logistics.

Scheduling Exams
One-hour exam dates will be announced at least 7 working days prior to the exam. Final exam will occur during finals week per the University Schedule found at: http://www.sfasu.edu/registrar/194.asp

Additional Phase II ESA Report Grade Information
Each team member will receive the identical score for EIS report and presentation. If necessary, the instructor may reduce the score for an individual student that did not meet expectations to complete any of the assignments related to the ESA. The reduced score will be based on the documents referenced below and observations of the instructor.
1. For each major document content item listed above, a team member shall be identified as the lead.
3. A peer-evaluation of your team member’s performance quality and quantity.

Learning Disability
Persons who require special accommodations necessary to complete course requirements must first contact the Disability Services Office at 468-3004. Following notification from the Disability Services Office, all reasonable accommodations will be provided in order to assist the student in successfully completing the course.