Course Syllabus

CoSM Class Syllabus / Policy

2020 / Maymester

ENV 502.001

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Office Hours: This is an online course and office hours will be offered electronically. In office hours are are available through scheduling upon request.

This course is entirely online, please refer to the detailed calendar found as a webpage in this module.

Text and Materials:

- *Applied Hydrogeology (Fourth Edition)* by Fetter, 2001 (recommended but not required)

- *Contaminant Hydrogeology (Third Edition)* by Fetter, Boving and Kreamer, 2018 (recommended but not required)

- *Geological Aspects of Hazardous Waste Management* by Hasan, 1996 (recommended but not required)

- GeoEnvironmental Engineering by Sharma and Reddy, 2004 (recommended but not required)

- NOTE: these books are great sources to add to your reference library if plan a career in environmental characterization,
especially those involving hydrogeology studies. Often you can
find digital or used copies of these sources.

**Course Description:** Environmental Contaminant Management
(ENV 502) – Three semester hours, thee hours lecture per week. This
course investigates the methods by which geological principals
are used to satisfy federal and state regulations concerning the
environment.

**Program Learning Outcomes:**

1. An analysis of the present state of the Earth, active geologic
   processes, and their products.
2. Basics principles and interpretations will be derived.
3. Environmental-geologic relationships explored.
4. Analysis of the regulatory, geologic, technologic aspects of
   handling of hazardous wastes.
5. Understanding of geologic processes and products, the
   interrelationships and problematics between generation,
   handling, and disposal of hazardous wastes.
6. Effects on the environment.
7. Solution possibilities.
8. Environmental geological aspects.

**General Education Core Curriculum Objectives/Outcomes:** The
objective of Environmental Contaminant Management is to gain and
understanding of the geological principals associated with
environmental waste management in association with federal and
state regulations concerning the environment.

**Student Learning Outcomes:** Student learning outcomes for this
course have been defined as follows:

**Computer-Based Skills** – The student will use the Internet and the
SFA Steen Library to search for and to retrieve information for a
publication-based research report. Word processing will be used for
the preparation of this term paper.

**Communication Skills** – The student will utilize verbal
communication skills in classroom discussions and in presenting
findings of research to the class.

**Interpersonal Skills** – The student will participate in classroom discussions of lecture topics and research results.

**Problem Solving [Critical Thinking]** – The student will learn the fundamentals of geology critical to environmental waste management and the application of space-time system concepts to the geological environment. The regulatory, legal framework governing handling, storage, and disposal of different waste materials is studied. Geology and risks of waste disposal are analyzed.

**Professionalism** – The student will recognize the necessity and importance of objective, scientific work and the role of presentation and defense of investigation results. [http://www.sfasu.edu/assessment/index.asp](http://www.sfasu.edu/assessment/index.asp)

**Course Requirements:** Environmental Contaminant Management (ENV 502) is designed for the Environmental Science student with no geology or hydrogeology background assumed. Therefore, emphasis will be placed first on an introduction to geologic principles and materials. Included are an analysis of the present state of the Earth, active geologic processes and their products. Second, geological and hydrogeological aspects of hazardous waste management will be studied within the legal and regulatory framework with examples provided. Module quizzes will be given based on material covered in each course module. No term project is assigned in this course because of the fast-pace of Maymester courses.

Student learning in the lecture section will be evaluated through a comprehensive final examination. See Course Calendar for scheduling details.

**Time:** Remember, you are expected to spend the same amount of time on online courses that you would spend for in the classroom for face-to-face courses. That is, expect to spend three hours per week on the lecture portion. In addition, success in this course will also require additional time spent in the material and studying; reports indicate that two to three additional hours (per credit hour) be spent—indeed, whether the class is online or face-to-face. Many of you are choosing to take an online course because of your work schedule, family responsibilities, and scheduling conflicts, so your time is precious. Be aware of the time commitment required by
this course and work responsibly.

**Course Topics to be covered:**

- Geology Fundamentals
- Sedimentology Fundamentals
- Hydrogeology Fundamentals
- Groundwater Characterization and Flow
- Solute Transport in Saturated Media
- Solute Transport in Unsaturated Media
- Contaminant Isolation and Monitoring
- Contaminant Containment and Remediation

*See the Course Calendar webpage for the dates associated with each topic.*

**Access to Content:** I will provide access to the content at the beginning of the course enabling you to work ahead at your own pace in this Maymester course. However, each module will have specific completion dates as assessed through module quizzes as listed on the Course Calendar (https://d2l.sfasu.edu/content/enforced/294831-50144.202025/Course Syl...). Some of you have very tight schedules and/or limited internet connectivity and could benefit from an early start. Answers to quiz and exam questions will be available once every classmate has submitted their assessment. Quizzes and module content will be available until 11:00 p.m. the day listed on the Course Calendar, but module content **cannot be viewed the day of the final exam**. So, plan appropriately!

**Final Examination Schedule:**

- Comprehensive Final Exam (Module 12): see Course Schedule

Exam and quizzes will be comprehensive and may include any or all of the following sections: 1) multiple choice questions; 2) true / false questions; 3) fill in the blank questions; 4) short answer questions; 5) figure illustration; 6) short essay questions. All quizzes and the Comprehensive Final Exam will take place online and be delivered via Brightspace. The exam will cover questions from lecture
modules as well as any assigned reading activities and outside sources (videos, webpages) referred to in the content material. Essay questions are part of the test and I expect you to use complete sentences, correct grammar and spelling.

The exam/quizzes are cumulative and timed, therefore you will not have adequate time to refer back to Unit/Module content for answers during the exam/quizzes. Questions on the exam and quizzes are written by the instructor, and the assessment content has been presented in the online content. Brightspace randomly selects questions from a question bank, and they appear one question at a time. You may not return to any question and change your answer after leaving that page so be sure of your response (study ahead of time!) before answering. It is recommended that you save your responses as you complete each question because of unknown timing of computer or power failure. I cannot help you if questions have not been saved. Once the time allotment for the exam has expired, the exam will be ended and scored.

No outside work or extra credit will be assigned to help improve your grade, so be prepared for the quizzes and the final exam. It is imperative that you log on and participate in all course material, pay attention to the course calendar, and keep up with the due dates for quizzes, discussions, and exams. In other words – get your money's worth!

**Dependable internet connection:** Especially when taking quizzes or exams, always rely on a dependable internet connection. I do not recommend taking an assessment via your phone or any public wireless connection (McDonalds, Starbucks, etc.).

**Discussion Board:** The Discussion Board can be used as a place to exchange information between the instructor and classmates. There will be a general "Questions" post where students can ask questions regarding the course content. This is helpful to all, and I will respond to questions as quickly as possible. I always appreciate questions, and am happy to try to help. Please keep your discourse respectful to all, inappropriate comments will not be tolerated.

**Lecture Grading Policy:**

- Final Comprehensive Exam @ 100 points = 100 points
- Ten weekly quizzes @ 20 points each = 200 points
• Total possible points = 300 points

• Lecture grade = your total points / 300, then multiply by 100

• Example: your lecture point total \( 250 \div 300 = 0.83 \times 100 = 83 \)

Grade Scale: 90-100 + A, 80-89 + B, 70-79 + C, 60-69 + D, < 60 = F

Academic Integrity (A-9.1): Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty: Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy [link](https://d2l.sfasu.edu/content/enforced/208967-27436.201820/4.1-student-academic-dishonesty.pdf?_d2lSessionVal=7z172tsZ0FpVOqsAeqpB8hd4&ou=245546&_d2lSessionVal=5fXOFJRmwc3ivtPemRSei6ER&ou=294831).

Withheld Grades Semester Grades Policy (A-54): Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.
The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

**Students with Disabilities:** To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to the Office of Disability Services (http://www.sfasu.edu/disabilityservices/) website.

*Content by: Kevin W. Stafford, PhD - Department of Geology, SFASU*
<table>
<thead>
<tr>
<th>Date</th>
<th>Module</th>
<th>Assignments</th>
<th>Classroom Activities</th>
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<tbody>
<tr>
<td>Monday, May 11, 2020</td>
<td>Module 1 Getting Started / Course Information</td>
<td>Read Module 1 online content</td>
<td>Module 1 (Getting Started) content will remain available throughout course.</td>
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<td>Print course syllabus and calendar</td>
<td>Complete &quot;Introduce Yourself&quot; Discussion Post</td>
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<tr>
<td>Tuesday, May 12, 2020</td>
<td>Module 2 Geology Fundamentals</td>
<td>Read Module 2 online content</td>
<td>Module 2 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 2 Quiz</td>
<td>Module 2 Quiz closes May 12, 2020 at 11:00 PM</td>
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<tr>
<td>Wednesday, May 13, 2020</td>
<td>Module 3 Fundamentals of Sedimentology and Deformation</td>
<td>Read Module 3 online content</td>
<td>Module 3 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 3 Quiz</td>
<td>Module 3 Quiz closes May 13, 2020 at 11:00 PM</td>
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<tr>
<td>Thursday, May 14, 2020</td>
<td>Module 4 Hydrogeology Fundamentals</td>
<td>Read Module 4 online content</td>
<td>Module 4 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 4 Quiz</td>
<td>Module 4 Quiz closes May 14, 2020 at 11:00 PM</td>
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<td>Friday, May 15, 2020</td>
<td>Module 5 Groundwater</td>
<td>Read Module 5 online content</td>
<td>Module 5 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 5 Quiz</td>
<td>Module 5 Quiz closes May 15, 2020 at 11:00 PM</td>
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<tr>
<td>1st Maymester Weekend</td>
<td>Module 6 Groundwater Flow</td>
<td>Read Module 6 online content</td>
<td>Module 6 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 6 Quiz</td>
<td>Module 6 Quiz closes May 18, 2020 at 11:00 PM</td>
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<tr>
<td>Tuesday, May 19, 2020</td>
<td>Module 7 Groundwater Patterns</td>
<td>Read Module 8 online content</td>
<td>Module 7 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 8 Quiz</td>
<td>Module 7 Quiz closes May 19, 2020 at 11:00 PM</td>
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<tr>
<td>Wednesday, May 20, 2020</td>
<td>Module 8 Solute Transport in Saturated Media</td>
<td>Read Module 8 online content</td>
<td>Module 8 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 8 Quiz</td>
<td>Module 8 Quiz closes May 20, 2020 at 11:00 PM</td>
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<td>Thursday, May 21, 2020</td>
<td>Module 9 Solute Transport in Unsaturated Media</td>
<td>Read Module 9 online content</td>
<td>Module 9 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 9 Quiz</td>
<td>Module 9 Quiz closes May 21, 2020 at 11:00 PM</td>
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<td>Friday, May 22, 2020</td>
<td>Module 10 Contaminant Isolation and Monitoring</td>
<td>Read Module 10 online content</td>
<td>Module 10 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 10 Quiz</td>
<td>Module 10 Quiz closes May 22, 2020 at 11:00 PM</td>
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<tr>
<td>2nd Maymester Weekend</td>
<td>Module 11 Contaminant Containment and Remediation</td>
<td>Read Module 11 online content</td>
<td>Module 11 Content will remain available until May 26, 2020 at 11:00 PM</td>
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<td>Complete Module 11 Quiz</td>
<td>Module 11 Quiz closes May 26, 2020 at 11:00 PM</td>
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<tr>
<td>Tuesday, May 26, 2020</td>
<td>Module 12 Comprehensive Final Exam</td>
<td>Review Modules 2-11 and associated quizzes in preparation for final exam</td>
<td>Modules 2-11 close on May 26, 2020 at 11:00 PM and will not be available for the final exam</td>
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<td>Final Exam will open on May 26, 2020 at 11:00 PM</td>
<td>Final Exam will close on May 27, 2020 at 11:00 PM</td>
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