The Department of Environmental Studies at the University of St. Thomas offers degree programs in environmental science (BS), and environmental policy and management or environmental studies (BA). The BS degree in Environmental Science has a distinct emphasis in natural and physical sciences, and the BA program in Environmental Studies has a distinct emphasis in social sciences. A joint-majors option is available that combines the BA degree program in Environmental Studies with Communication, International Studies and Political Science. Pending administration approval, an urban studies emphasis for either Environmental Science majors or Environmental Studies majors will be available. A minor program is also available for non-majors who wish to add an interdisciplinary to their major. See your instructor for more details or visit our website www.stthom.edu/environmental_studies

Course Description:
The laboratory is designed to run parallel with the lecture and to reinforce and amplify course materials. The first laboratory will begin with an overview of earth materials and minerals. Subsequent laboratory sessions in the first half of the semester will cover earth materials including the classification and identification of minerals and rocks and the collection and analyses of soils.

The second half of the semester will begin with exercises on topographic maps, contouring and geologic maps followed by an introduction into physical hazards primarily flooding, earthquakes and coastal

<table>
<thead>
<tr>
<th>Class Period</th>
<th>Subject(s)</th>
<th>Chapter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/23</td>
<td>Lab Introduction</td>
<td></td>
</tr>
<tr>
<td>8/30</td>
<td>Minerals and Mineral Identification</td>
<td>1</td>
</tr>
<tr>
<td>9/6</td>
<td>Igneous Rocks and Processes</td>
<td>2</td>
</tr>
<tr>
<td>9/13</td>
<td>Sedimentary and Metamorphic Rocks</td>
<td>3, 4</td>
</tr>
<tr>
<td>9/20</td>
<td>Soil Collection and Grain size Analysis</td>
<td>5</td>
</tr>
<tr>
<td>9/27</td>
<td>Introduction to Topographic Maps</td>
<td></td>
</tr>
<tr>
<td>10/4</td>
<td>Mid Term Exam</td>
<td></td>
</tr>
<tr>
<td>10/11</td>
<td>Mid Semester Break</td>
<td></td>
</tr>
<tr>
<td>10/18</td>
<td>Geologic Maps and their Interpretation</td>
<td>7</td>
</tr>
<tr>
<td>10/25</td>
<td>Ground Water Resources and Pollution</td>
<td>8</td>
</tr>
<tr>
<td>11/15</td>
<td>Shoreline Processes and Pollution</td>
<td></td>
</tr>
<tr>
<td>11/15</td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>11/22</td>
<td>No Class</td>
<td></td>
</tr>
<tr>
<td>11/29</td>
<td>Final Examination*</td>
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</tr>
</tbody>
</table>

*Laboratory final is given during the last class period in the semester

Learning Goals

The laboratory goals include reinforcement of classroom lectures, hands on laboratory experience, learning laboratory procedures and basic experimental techniques, and enhancement of basic content knowledge. This will be accomplished by instruction in the following subject areas:

1. Identification and classification of selected minerals while learning the principles related to identification.
2. Identification and classification of selected rocks while learning the principles related to formation and identification.
3. The understanding and use of topographic maps and air photos.
4. The understanding and use of geologic maps including the ability to identify geologic structures represented on them.
5. The understanding of geomorphologic features formed by water on the surface and their identification on topographic maps, and pollution issues.
6. The understanding of groundwater resources and of geomorphologic features formed in the subsurface by groundwater and their identification on topographic maps, and groundwater pollution.
7. A familiarity with coastal processes and hazards.

**Required Readings/Materials**

1. Harris, W.M. Laboratory manual for Environmental Science II
2. Physical Geology laboratory samples on reserve in the library at the check-out desk, listed under GEOL 1141 under Dr. Harris’ name.

**Calendar - Assignments and Due Dates:**

1. Midterm Examination  
   October 4 2016
2. Final Examination  
   November 29, 2016
3. Laboratory notebook/exercises  
   Due at end of each Laboratory period*

**Computation of Grades:**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Examination</td>
<td>35%</td>
<td>(Rocks, Minerals and Soils)</td>
</tr>
<tr>
<td>Final Examination</td>
<td>35%</td>
<td>(Maps and Geomorphology)</td>
</tr>
<tr>
<td>Laboratory notebook/exercises</td>
<td>30%</td>
<td>(Each exercise due at the end of each laboratory period, laboratory notebooks due at midterm and at final)</td>
</tr>
</tbody>
</table>

**Grading Scale:**

- 93-100  A
- 90-93   A-
- 87-89   B+
- 83-86   B
- 80-82   B-
- 77-79   C+
- 73-76   C
- 70-72   C-
- 67-69   D+
- 60-66   D
- 59 and lower  F

**Expectations of Students:**

**Academic Dishonesty:**

“The penalty for an incident of academic dishonesty is, at the discretion of the professor, either a mark of zero for the work in question or the grade of “F” for the course. A student guilty of two incidents of academic dishonesty will be dismissed from the university.”

**Undergraduate Catalog**

Turning in Assignments and the Final Examination: Students must submit all major assignments in order to take the final examination. Failure to complete the course (by not turning in assignments) will result in failure of the course.

Tests: The midterm and final laboratory exams will include practical portions. Unannounced quizzes may be given during the lab period. Such quizzes will be short answer, multiple choice, matching and some practical portions. Quiz grades will be averaged in with your laboratory notebook grade. If you miss any of the quizzes, you have one week to make them up. Any quiz not made up will be recorded as a zero.
Participation: Class participation is an important part of the learning process. Variations in points of view are encouraged and will be treated with respect. In the laboratory setting you will be encouraged to work in groups for most exercises.

Operating Rules:

Attendance: Attendance is very important in this course. Because of this, students should not miss any of the laboratories. If a student has no valid excuse for missing a laboratory assignment that student will no points for that laboratory. Any assignments submitted after the laboratory session will receive no points.

Absences: NO EXAMS WILL BE GIVEN EARLY. Unless a student has a valid excuse for an absence, any tests, quizzes or other assignments cannot be made up at a later time all such assignments will be recorded as a zero. If an excused absence necessitates taking a makeup exam, it is the student’s responsibility to schedule a time with the testing center. Makeup exams are usually essay exams.

Common Course Requirements for the Department of Environmental Studies

The beginning laboratories in Geology and Environmental Studies will require that assignments from all missed laboratories must be made up within one week of the date missed unless arrangements are made. All assignments not made up will count as a “0” for the assignment. Attendance at the final examination indicates the student’s acceptance of the grad of “0” for all incomplete assignments.

Beginning laboratories will have at a minimum two examinations, unannounced quizzes and either a laboratory notebook or equivalent assignment.