Fall 9-1-2000

GEOL 480.01: Hydrogeology

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FALL 2000
GEOLOGY 480 - 4 CREDITS
HYDROGEOLOGY

Instructor: William W. Woessner (SC329)
Text: Required - Applied Hydrogeology

Course goals and objectives: Prepare students in environmental geology and related fields to evaluate and quantitatively analyze hydrogeologic problems.

CLASS DATE  CHAPTER
September 5  Intro-Hydrologic Budget  1, 2, 12.5
September 7  Hydrologic Budget  2, 3
September 12  Properties of Earth Materials
September 14  Properties of Earth Materials  4
September 19  Aquifer Properties  4
September 21  Aquifer Properties
September 25  Last Day to Add/Drop by Dial Bear
September 26  Fluid Potential  5
September 28  Fluid Potential  5
October 3  Equations of GW Flow - Problem Set I Due
October 5  Equations of GW Flow
October 10  Exam I
October 12  Steady Rate Flow  5
October 16  Last Day to Drop Add (No $$$ Back)
October 17  Steady State Flow  5
October 19  Unsaturated Flow  6
October 24  Unsaturated Flow - Regional Flow Systems  8
October 26  Regional Flow Systems  8
October 31  Regional Flow Systems
November 2  Hydrogeologic Systems  9
November 7  Holiday
November 9 Hydrogeologic Systems - Problem Set II Due

November 10 Field Trip - 12:00 p.m. - 5:00 p.m.

November 14 Exam II
November 16 No Class - Work on Term Paper

November 21 Flow to Wells - Term Paper Due
November 23 Holiday

November 28 Flow to Wells
November 30 No Class

December 5 Flow to Wells
December 7 Water Quality

December 12 Solute Transport
December 14 Ground Water Management - Problem Set III Due

FINAL EXAM: Wednesday, December 20, 10:10-12:10 p.m.

COURSE ASSESSMENT: Quality of problem sets, Exams and term paper.

GRADING:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>3 Problem Sets</td>
<td>27%</td>
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<tr>
<td>2 Exams</td>
<td>40%</td>
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<tr>
<td>Term Paper</td>
<td>8%</td>
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<tr>
<td>Final Exam</td>
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TERM PAPER:

The term paper will be a research report on the Hydrogeology of the city or county in which you grew up or a topic assigned by the Professor. All reports will be assigned no later than September 30. All reports will be no longer than 10 pages of text (excluding figures) and will clearly describe the location, geology, and hydrogeology of the area. It will include information on the hydrostratigraphy, occurrence, movement, quantity, and quality of groundwater as well as its uses in the area. All papers will follow a format of the USGS Water Resources Investigations and include full cited references. Sources of information include professional journal articles, State Geological Survey and Water Survey reports, USGS Water Supply Papers, Professional Papers and Water Resources Investigations, and consulting reports.

All assignments given are expected to be turned in on time for grading in neat and edited form. Problem set assignments are due at the beginning of class on the day due with no exceptions. If you cannot make it to class, give the work to someone who can turn it in for you.

I will post office hours for questions, and you may see me any other time I am in my office if it is convenient.
Outside reading for this class is strongly suggested. The library contains a number of general hydrogeology textbooks which I feel will give additional depth to parts of the course I can only summarize. A list of readings is attached.

REFERENCES

Textbooks


Articles and Other Publications