<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Topic</th>
<th>Readings</th>
<th>Lab</th>
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</thead>
<tbody>
<tr>
<td>Jan. 16</td>
<td>Introduction, Geology and Environmental Connections Process linkages: Earth surface systems—case examples</td>
<td>Read Spokane Flood Article Text Ch 1</td>
<td>Megaflow (inside)</td>
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<td>Jan. 23</td>
<td>Spokane Flood Controversy and Scientific Method Solar System and Planetary Origins Geologic Time, History, and Dating Earth differentiation, interior, and evolution of the Lithosphere – overview of Earth structure</td>
<td>Text Ch. 1, Appendix A Lab Ch 8 (dating) Lab Ch. 3 Text Ch. 2</td>
<td>Minerals (inside) Lab Ch. 3</td>
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<td>Jan. 30</td>
<td>Rocks, The Rock Cycles, and Igneous Rocks Volcanoes – eruptive styles, morphology, distribution Volcanic hazards - emphasis on Hawaii &amp; Cascades</td>
<td>Text Ch 2 Text Ch 5 Lab Ch. 4, 5, 6, 7</td>
<td>Crystalline Rocks (Ign. Meta (in)</td>
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<tr>
<td>Feb. 6</td>
<td>Earthquakes – origins, distribution, measurement Earthquake hazards</td>
<td>Text Ch. 4 Lab Ch 16, 9</td>
<td>Volcanic Haz. (in)</td>
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<td>Feb. 13</td>
<td>Geologic Structure -- folds and faults in the crust Plate Tectonics – a unifying theory for earth dynamics</td>
<td>Text Ch 3 Lab Ch 2</td>
<td>Earthquake Haz. (in)</td>
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<tr>
<td>Feb. 27</td>
<td>Soils – intro, description, field profile, processes Soils – factors, variations, applications to Env. Geol.</td>
<td>Text Ch.11 -soils</td>
<td>Landscape Developmt. Topo Maps Ch 9 (field)</td>
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<td>Mar. 6</td>
<td>Mass Wasting – Creep, Rockfalls Mass Wasting -- Landslides Mass Wasting – Debris flows and Alluvial fans</td>
<td>Text Ch. 8 Lab Ch 14 -fans Lab Ch 11 -slides</td>
<td>Landslides &amp; Levees LockHaven (field)</td>
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<td>Mar. 13</td>
<td>SPRING BREAK No Lab</td>
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<td>Mar. 20</td>
<td>Rivers – Drainage Basins (watersheds) Runoff Hydrology – channels, flow, hydrographs Stream Channels – flow types, sed. movement&amp;yield</td>
<td>Text Ch. 6 Lab Ch 11</td>
<td>Bedrock Structure – Coal – Bear Vall. (field)</td>
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<td>Mar. 27</td>
<td>Stream Channels – patterns, proc., floodplains, terraces Impacts of Flooding – controls, variation Flood Frequency and Paleoflood Hydrology</td>
<td>Text Ch. 6</td>
<td>Mining Impacts – Centralia (field)</td>
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<td>Apr. 3</td>
<td>EXAM #2 – MONDAY Groundwater – processes, flow and contamination Landfills and waste disposal issues</td>
<td>Text Ch. 10, 15</td>
<td>Stream Proc &amp; Meas. Buffalo Cr. (field)</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Lab/Text Assignment</td>
<td>Field Location</td>
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| Apr. 10 | Subsidence - Karst processes, sinkholes                      | Lab Ch 12  
Text Ch. 7  
Lab Ch 7 | Landfill & Wastewater (field) |
|       | Coastal Processes and Features  
Types of coasts, beaches, waves, tides, and currents |                                          |                               |
| Apr. 17 | Barrier Islands – Processes, Dynamics, Coastal Storms, Environmental Issues  
New Orleans Case Study and Discussion | Text Ch. 9, 19  
skim Ch. 13-14  
Lab Ch 13 | Karst – Nipenose Valley (field) |
| Apr. 24 | Global Climate, Climate Change – past, present, future and impacts of change on surface processes  
Pleistocene and glacial processes  
Sustainability and The Environment – Discussion  
(Discussion Seminar – April 28)  
Sustainability Assignment – from website and reading  
http://bcn.boulder.co.us/basin/local/sustainin0.htm | Text Ch. 9, 19  
skim Ch. 13-14  
Lab Ch 13 | Wetland Hydrology & Glacial Heritage  
Montandon (field)  
(alt stream) |
| May 1  | EXAM #3 - MONDAY                                   | Poster Session (INSIDE)  
**MAY 1 -- Lab** | Poster Session In Lab |

**Important Information:**

ALL ASSIGNMENTS (including labs, assignments, papers, etc) MUST BE TYPED UNLESS OTHERWISE INSTRUCTED

Labs:  
(you must fill out the field trip forms)  
Lab Instructor will be Prof. Brad Jordan

Inside:  please bring pencils, colored pencils, eraser, your textbook, and paper.
Field trips: please bring a clipboard (81/2 x 11 preferred), pencils, colored pencils, eraser, paper. You will not need your textbook.
Be prepared to walk through brush, over loose rock in quarries, and to
Be out in all kinds of weather. You should wear long pants, hiking boots
or sturdy sneakers that can get dirty. Anticipate weather changes by
dressing in layered fashion – always have a jacket along and bring hats
and rain gear!!! Things can change very rapidly!! It is advisable to bring
water, especially when it is warm. Bring a day pack to carry your items.
Labs run from 1:00 – 5:00 p.m. Some labs may finish early when possible. Most trips will not.

Possible opportunity to participate with another class on an extended weekend trip to North Carolina Outer Banks – coastal processes and Virginia Blue Ridge debris flows.

Attendance:  I will take periodic roll in lecture, but your attendance is up to you. I strongly advise attending ALL lectures because I will be making heavy use of slides. I will try to make most lecture slides available on Blackboard. However, most of the time these will be images without notes, thus, if they are to make sense you will need to take notes in class to annotate them. Exams frequently contain slides and are heavily weighted toward materially discussed in class. 
Everyone is expected to bring in news items to share. We live on a
Very dynamic planetary surface with lots happening – let’s hear about it!!
Lab attendance is required. You will be discounted for missing labs.

**Grading:**
- 3 One-hour exams = 50%
- News, class participation, assignments, and discussions/seminars = 10%
- Environmental Geology Poster = 20%
  - Poster Due May 1, 2005 (in last lab session)
- Lab = 20%

**Textbooks:**