<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Lab</th>
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</table>
| Jan. 19   | Introduction, Perspectives  
Process linkages in Earth surface systems | No Lab – Read Articles and prep for your seminars                      |
| Jan. 26   | Climate change and Geomorphic Response  
San Diego County inside | San Diego County inside                                              |
| Feb. 2    | Rockfalls and Landslides  
| Feb. 9    | Debris Flows  
| Feb. 16   | Stream Channelization  
-- Channel alterations  
-- Impact of Dams  
Rapidan River, VA Trip Prep  
VA TRIP – 1995 Flood and Debris Flows, Fans, and a Stream Restoration Project  
Feb. eve20,21,22 | Rapidan River, VA Trip Prep  
VA TRIP – 1995 Flood and Debris Flows, Fans, and a Stream Restoration Project  
Feb. eve20,21,22 |
| Feb. 23   | Stream Restoration | VA Field Trip Data Processing -- inside                               |
| Mar. 1    | Impact of Land Use on River Systems  
Buffalo Creek Project Intro  
- Q, Susp. Sed Load  
- Paleooflood reconstruction  
- Geomorphic history and land use interactions  
(some field work possible) | Buffalo Creek Project Intro  
- Q, Susp. Sed Load  
- Paleooflood reconstruction  
- Geomorphic history and land use interactions  
(some field work possible) |
| Mar. 8    | Geomorphic Dating Techniques (landforms, events)  
VA Project Presentations | Mid-Term Exam (held during lab after project pres)  
VA Project Presentations |
| Mar. 15   | SPRING BREAK | Oral Mid-Term Exam |
| Mar. 22   | Floods – Impacts, Spatial and Temporal Variability  
McPhee – “Atchafalaya River, Old River Control” | Buffalo Creek Project - field |
| Mar. 29   | Paleoflood Hydrology | Susquehanna Gorge Paleoflood Trip (12-8 p.m.) |
| Apr. 5    | Coastal Hazards, Barrier Islands Processes, Dynamics, Coastal Storms, Film “The Beaches Are Moving” Pilkey | Buffalo Creek Project - field |
| Apr. 12   | Coastal Hazards continued  
Tectonic Geomorphology | Buffalo Creek Project -- field Optional COASTAL TRIP Apr. 15-18 th (or Apr 1-4) |
| Apr. 19   | Tectonic Geomorphology and case studies | Buffalo Creek Project - field |
| Apr 26    | Paleopedology | Buffalo Creek Presentations |
| May 3     | Watershed Ethics and Sustainability | Research Proposals Due May 4, by 4 p.m. |

http://www.facstaff.bucknell.edu/kochel/
Discussion Seminars  
(led by class teams)

Team Responsibilities for Class-led Seminars:

1) Discussion Questions Due: Fridays before week of seminar  
   - 6-8 questions to stimulate discussion  
2) Readings Due: Wednesday before week of the seminar  
   - 3-4 research papers (journal articles or book chapters)  
   - research on your own first, then discuss your choice  
   of potential articles with me first  
3) Leading Seminar discussion

Tentative Schedule of Class-led Seminars  
(each team will lead three)

<table>
<thead>
<tr>
<th>Date</th>
<th>Leader</th>
<th>Seminar Discussion Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb. 18</td>
<td>Team #1</td>
<td>Impact of Dams (construction and deconstruction)</td>
</tr>
<tr>
<td>Mar.  3</td>
<td>Team #2</td>
<td>Land Use Impact on Fluvial Systems</td>
</tr>
<tr>
<td>Mar. 10</td>
<td>Team #1</td>
<td>Geomorphic Dating Techniques</td>
</tr>
<tr>
<td>Mar. 26</td>
<td>Team #2</td>
<td>Mississippi River Flood Control</td>
</tr>
</tbody>
</table>
| Apr. 19| Team #1| Tectonic Geomorphology – applications  
Tectonic Geomorphology – applications  
Paleoseismology, Rates of erosion and uplift, etc. |
| Apr. 28| Team #2| Paleopedology – paleosols and applications                        |
**Important Course Information:**

**Grading:** Most of your grade in this class will come from your participation in field trips, project research, and project reports and presentation. Significant will also be your participation and leadership in discussing the assigned literature in class.

- Participation/Discussion and Seminars = 20%
- Project/Presentations (2) = 40%
- Misc. Labs, Field Trips and smaller assignments = 20%
- Research Proposal = 10%
- Exams = 10%

**Readings:** There is no text for this course, other than the supplementary readings from the McPhee paperback. Thus, we will rely heavily upon reading from the scientific literature. Reading lists will be distributed and/or posted frequently for each of the topics discussed in class, as well as for the class-led seminars. Readings will be available in the Seminar Room in a bin labeled GEOL 310. YOU ARE EXPECTED TO READ THESE ARTICLES CAREFULLY AND TAKE NOTES AS THESE ARTICLES WILL SERVE AS YOUR TEXT FOR THE COURSE.

**Research Proposal:** You will be required to prepare a research proposal that requests funds to conduct research in a topic of your choice related to the class. The topic may be spin-off from one of the two major field projects (VA or Buffalo Creek), or, it may be something that you became interested in related to one of the other topics. You will be asked to follow the guidelines for writing NSF research proposals, including: 1) title page, 2) project summary (1 page), 3) text of the proposal, including figures (15 p. limit) – text should include project significance, plan for research, time-table for research, anticipated products, short summary of your (the P.I.) qualifications, and references cited, and 4) an annotated project budget. See the following for NSF guidelines [http://www.nsf.gov/pubs/2004/nsf042/2.htm#IIC2](http://www.nsf.gov/pubs/2004/nsf042/2.htm#IIC2). This may seem over detailed, but it might help. Basically, follow the items I listed above.

**Supplementary Text (Required):** A collection of three essays from the New Yorker magazine, combined here.