

Geology 352 -- Seminar in Quaternary Geology and Surface Processes 1 to 3 credits

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OBJECTIVES

This course will use the reading and discussion of journal articles and professional papers to further our understanding of the recent events in geologic, climatic and ecological history. Each week, the group will read one or two papers in detail and spend Monday evening discussing not only the content of these papers but the approach that the author took to collecting and presenting data and opinions. By the end of the semester, not only should we have learned more about natural history but you should have more confidence in reading and criticizing professional papers.

YOUR DISCUSSION TOPIC

During the course of the semester, each one of you will pursue in greater detail a topic of interest to you that is related to the general theme of the seminar. You will be responsible for finding and reading thoroughly, 6 to 10 papers dealing with your selected topic. After reading these papers, you should summarize each one in an annotated bibliography and select the one most interesting, for reading by the entire group. The annotations in your bibliography should be one or two paragraphs long and should include the author's most important data and interpretations. The annotations should also include your subjective opinion on the scientific quality and "readability" of the paper.

One week prior to the discussion of our paper, it is your responsibility to post a copy of your annotated bibliography on the class board (outside my office, Perkins 203) and to email me a copy on disk in Microsoft Word or as a PDF file for the Macintosh or PC. I'll post the bibliographies to our class web site.

On the Monday evening before it is your turn to lead the discussion, you should distribute a copy of your chosen paper (double sided if possible) to each member of the class. Please post the paper of the week outside my office door if anyone needs to make an extra copy. The week before you discuss your paper, you will be responsible for making a 10 minute presentation with sufficient detail to bring your classmates "up to speed" on what they need to know to read the paper. This introduction is particularly important as we are a diverse group! Most weeks, two people will be presenting together on similar topics. There is no formal page limit but try to keep

the total reading load reasonable. If your paper is available in PDF format, please email me a copy and I'll post it to our web site.

As discussion leader, you will be responsible for directing the discussion of the paper. Typically one might begin the discussion with a summary of the author's approach and findings. I find it useful to prepare a list of questions to pose to the group and to stimulate discussion when that awkward silence falls over us. Because you will have read a number of related papers in order to prepare your bibliography, you will most likely have a much deeper knowledge of the particular subject matter than the rest of us and should be able to offer explanations and background material to the group. You may wish to coordinate your discussion with the other person leading that particular week. Interactive exercises are encouraged! Get and keep all of us involved.

PARTICIPATION

The involvement and participation of each and every one of us is critical to the success of this seminar. Most importantly I hope that all read the assigned paper each week. I suspect that it will take two to four hours to read and understand thoroughly each paper. Don't be surprised if you need to read some papers twice, once lightly to figure out what the author is trying to say and a second time to really understand what the data mean and how the author has interpreted them. During the week that you are leading the discussion, your preparation time will probably be twice as long.

Your grade (ugh...something at a grad level I could just as well dispatch with) in this seminar will be based on several factors:

1. Your annotated bibliography.
2. Your attendance and participation each evening.
3. The questions you pose to the group each week

Some ideas for your annotated bibliography....Feel free to come up with your own! Topics related to your thesis research are encouraged.

Paleo flood records
Carbon cycle and global warming
Interaction of streams and woody debris
Native American European impact on geomorphology
Neotectonics of New England
Stratigraphic control of groundwater distribution
Glacial histories
Ice cores records
Interglacial environments
Soils
Faunal and floral changes
Introduced species and land-use effects
"old" glaciations
Glacial processes -- till, eskers, glacial lakes, isostatic rebound
Historical views on the Quaternary....