This seminar will explore the relationships between changing climates and geomorphic processes and landforms throughout Earth’s history.

**Schedule:**
1/25   General climate history & climate mechanisms.
2/1    Large-scale/Long-term changes - at geologic scales.
2/8    Large-scale/Long-term changes - Quaternary glacial/interglacials.
2/15   Large-scale/Long-term changes - Quaternary glacial/interglacials.
2/22   Holocene changes in climate and geomorphic systems.
2/29   Holocene changes in climate and geomorphic systems.
3/7    Desert geomorphology and climate change.
3/14   American Southwest and New Mexico.
2/28   Modern climate change and recent geomorphic responses.
4/11   Climate and Geomorphology: Theoretical Issues
4/18   Geomorphic evidence of climate change on Mars.
4/25   Future geomorphic changes under predicted climate/environmental change.
5/2    Future geomorphic changes under predicted climate/environmental change.

**Basic Procedures:**
- Each week participants will be assigned 2-3 readings. These will be a combination of papers read by the entire group and papers read individually.
- Each participant will be responsible for writing a one-page summary for each reading and preparation of notes for in-class discussion during the following week.
- Periodically, participants will select their own readings either from an available list or from individual searches. Summaries will be presented to the discussion group by each participant.
- Each participant will formulate a relevant research topic and write a 15-page (including bibliography), double spaced, 12-point font term paper.

**Grading:**
Weekly summary papers..............................35%
Weekly discussion........................................35%
(preparation and participation)
Term Paper..................................................30%
Readings:

1/25  General climate history & climate mechanisms.
   • Bull91
   • Sowers00
   • Wright00

2/1  Large-scale/Long-term changes - at geologic scales.
   • Dunai05
   • Molnar04
   • Parrish98 (parts 1, 2, 3)
   • Pederson00
   • Pelzhen01

2/8  Large-scale/Long-term changes - Quaternary glacial/interglacials.
   • Andrews00
   • Bogaart00
   • Owen97
   • Pederson01

2/15 Large-scale/Long-term changes - Quaternary glacial/interglacials.
   • TBA

2/22 Holocene changes in climate and geomorphic systems.
   • Bull00
   • Coulthard00
   • Harden10
   • Millar99

2/29 Holocene changes in climate and geomorphic systems.
   • TBA

3/7 Desert geomorphology and climate change.
   • Lancaster00
   • LaVee98
   • Molnar01
   • Tsoar05
   • Waters01

3/14 American Southwest and New Mexico.
   • Allen05
   • Anderson02
   • Buck99
   • Butler07
Modern climate change and recent geomorphic responses.
- Etheredge04
- Pazzaglia05

Climate and Geomorphology: Theoretical Issues.
- Evans94
- Knox00
- Moglen98
- Phillips06
- Rinaldo95
- Tucker97
- Viles03
- Whipple99

Geomorphic evidence of climate change on Mars.
- Dickson07
- Golombek06
- Kanner04
- Marchant05
- Marchant07
- Page09
- Stepinski05

Future geomorphic changes under predicted climate/environmental change.
- Dehn00
- Goudie06
- Jones01
- Jones93
- Slaymaker09
- Stoffel06
- Thomas05

Future geomorphic changes under predicted climate/environmental change.
- TBA