

**EART 148: Glaciology (DC, Disciplinary Communication)  
Spring 2014, EMS Bldg. D250, MWF 9:30-10:40am**

**Text:** Shawn J. Marshall, *Cryosphere*  
**Instructor:** Dr. Slawek Tulaczyk, E&MS Bldg. A112, 459-5207, [stulaczy@ucsc.edu](mailto:stulaczy@ucsc.edu)  
**Office hours:** MW, 11am-12pm  
**TA:** Grace Barcheck, [cbarchec@ucsc.edu](mailto:cbarchec@ucsc.edu)  
**Section:** EMS Bldg., D236, W 2-3pm  
**Final Exam:** Wednesday, June 11, 7:30pm-10:30pm

**Course Evaluation:**

TASK	SCORE	DETAIL
Proposal Outline	1%	1 page
Proposal Draft	3%	2 pages
Proposal Final	4%	2 pages
Paper Outline	1%	1 page
Paper Draft	9%	6 pages
Paper Final	12%	6 pages
Proposal Presentation	3%	3 minutes, no slides
Paper Presentation	10%	10 minutes, <10 slides
Participation	6%	
First Midterm	17%	
Second Midterm	17%	
Final exam	17%	
<b>TOTAL</b>	<b>100%</b>	

As per requirements for a DC course, each page has to be in 12-point Times New Roman font, with double lines and 1.25 inch page margins. Each such page should contain about 240 words. Plagiarism will be prosecuted to the full extent of UCSC regulations.

- (1) Proposal - Choose a relevant scientific topic and justify why you want to pursue it for your research paper (think of it as a short persuasive essay). Submit a 1-page outline first for approval. Then submit a 2-page draft and improve based on feedback from us. For references, use scientific papers or government research reports (**no general Internet sources!**)
- (2) Research paper (on the topic of the proposal) - Submit a 1-page outline first. Follow the structure of a scientific paper or a technical report: (1) Introduction section explaining briefly the Hypothesis/es to be tested and giving justification why the Hypothesis/es is worth testing, (2) Methods section giving the details of your research approach, (3) Results section giving the results with minimum commentary, (4) Discussion section containing the discussion of your results, (5) Conclusion section. This has to be to the point and informative with limited own opinion. You are required to use at least one equation and one graph. For references, use scientific papers or government research reports (no general Internet sources!)
- (3) Oral presentation of your proposal (during section) - Make a short (3 minutes) speech in which you will convey the content of your proposal (no visuals, just words).
- (4) Oral presentation of your paper - Give a 10 minute presentation with digital slides summarizing the results of your research paper. Some of these will be given during the field trip others during the sections.
- (5) Participation - Stand out in a positive way, ask questions, be a team player. Disruptive behavior impacting class dynamics will be penalized. As per UCSC regulations, disturbing conduct as well as cheating and plagiarism will be reported for disciplinary actions.
- (6) Exams - Multiple choice exams (bring pink scantrons).

All assignments lose 50% of their total score immediately after their due date and 10% each additional late week.

Date	Day	Details	Deadlines
March 31	M	Introduction	
April 2	W	Ice in the Solar System	
April 4	F	Life in Ice	
April 7	M	History of Glaciations	<b>Proposal Outline Due</b>
April 9	W	Glacial Geomorphology	
April 11	F	Alpine Landscape	Proposal Outline Returned
April 14	M	Glacial Geology 1	
April 16	W	Glacial Geology 2	
April 18	F	Introduction to Cryosphere 1	<b>Proposal Draft Due</b>
April 21	M	Introduction to Cryosphere 2	
April 23	W	<b>Midterm 1</b>	
April 25	F	Material Properties of Snow and Ice 1	Proposal Draft Returned
April 28	M	Material Properties of Snow and Ice 2	
April 30	W	Snow and Ice Thermodynamics 1	
May 2	F	Snow and Ice Thermodynamics 2	<b>Final Proposal Due</b>
May 5	M	Seasonal Snow and Freshwater Ice 1	<b>Paper Outline Due</b>
May 7	W	Seasonal Snow and Freshwater Ice 2	
May 9	F	Sea Ice 1	Paper Outline Returned
May 12	M	Sea Ice 2	
May 14	W	<b>Midterm 2</b>	
May 16	F	<b>Field trip - no meeting</b>	
May 19	M	Post field trip - no meeting	
May 21	W	Glaciers and ice sheets 1	<b>Paper Draft Due</b>
May 23	F	Glaciers and ice sheets 2	
May 28	W	Permafrost	Paper Draft Returned
May 30	F	Cryosphere-Climate Processes 1	
June 2	M	Cryosphere-Climate Processes 2	
June 4	W	The Cryosphere and Climate Change 1	<b>Final Paper Due</b>
June 6	F	The Cryosphere and Climate Change 2	