

**EART 148: Glaciology**  
**Winter 2018, EMS Bldg. D236,**  
**TTh 8:00-9:35am**

**Text:** PDF distributed by the instructors through Canvas  
**Instructor:** Dr. Slawek Tulaczyk, E&MS Bldg. A112, 459-5207, [stulaczy@ucsc.edu](mailto:stulaczy@ucsc.edu)  
**Office hours:** Th 1:30-3:30pm, A112 for ST; T 10am-Noon, A170 for SN  
**TA:** Sarah Neuhaus, [suneuhau@ucsc.edu](mailto:suneuhau@ucsc.edu)  
**Section:** EMS Bldg., D236, W 5:45-6:45pm  
**Final Exam:** Tuesday, March 19, 8am-11am

Introduction to the role of snow and ice in the dynamics of the earth surface system. Snow deposition and metamorphosis. Heat and mass balance at snow and ice surfaces. Flow of glaciers, ice sheets, and sea ice. Methods of climate reconstruction. Ice age theories.

**Course Evaluation:**

TASK	SCORE	DETAIL
Comprehensive Final	25%	open notes, calculator, March 19, 8am
Midterm 1	15%	open notes, calculator, January 29, 8am
Midterm 2	15%	open notes, calculator, February 21, 8am
Homework Problem Sets	16%	one week to complete, due Thursday at 8am
Field Trip or Substitute	5%	Yosemite area field trip, March 2-3 (Sat/Sun)
Field Trip Presentation	5%	10 minute presentation on assigned topic
9 Pop Quizzes (lectures)	9%	attendance + readings
Section Participation	10%	details provided by TA
<b>TOTAL</b>	<b>100%</b>	

**FINE BUT IMPORTANT PRINT:**

- **Academic misconduct of any kind (e.g., cheating, plagiarism, disruptive behavior) will be prosecuted to the full extent of UCSC regulations.**
- **All assignments lose 50% of their total score immediately after their due date and 10% each additional late day.**

***Distribution of Lecture Notes and Materials: Please note that students may be disciplined for selling, preparing, or distributing course lecture notes. The unauthorized sale of lecture notes, handouts, readers or other course materials is a violation of campus policies as well as state law. Violation by distribution to the public may also constitute copyright infringement subject to legal action.***

Date	Day	Details	Deadlines
01/08	T	<i>Introduction, Ice On Earth</i>	
01/10	Th	Ice in the Solar System - Let there be life?	
01/15	T	Deep-Time History of Climate and Glaciations	
01/17	Th	Cenozoic Cooling and Glaciations	Homework 1 due
01/22	T	Glaciations and human evolution and dispersal	
01/24	Th	Climate Change and Future Cryosphere	Homework 2 due
01/29	T	<b>Midterm 1</b>	
01/31	Th	Geomorphic legacy 1	Homework 3 due
02/05	T	Geomorphic legacy 2	
02/07	Th	Glacial sediments	Homework 4 due
02/12	T	Snow and snow hydrology	
02/14	Th	Material properties of ice - freezing	Homework 5 due
02/19	T	Material properties of ice - deformation	
02/21	Th	<b>Midterm 2</b>	Homework 6 due
02/26	T	Mass balance of glaciers	
02/28	Th	Glacial motion	Homework 7 due
03/02-03	Sa/S	<b>Field trip - no meeting</b>	
03/05	T	Glacial hydrology	Substitute trip assignment due
03/07	Th	Response of glaciers to climate changes	Homework 8 due
03/12	T	Sea ice	
03/14	Th	Permafrost	
03/19	T	<b>8AM-11AM, D236 EMS Bldg. FINAL EXAM</b>	