SNOW AND AVALANCHE MECHANICS
Geog/Atmos 5260
Spring Semester 2017

Lectures: Wednesday: 6:00 –8:00pm Room 111, Building 73
Laboratory: Friday: 1:30 - 5:30pm Various locations Little and Big Cottonwood
Office hours are directly after class on Wed and Fri or by appointment…
Phone: Ralph 801-518-2442

Instructors: Ralph Patterson ralph.patterson@utah.edu
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Class Website www.inscc.utah.edu/~campbell/snowdynamics/

Class Texts: 1) "The Avalanche Handbook" Edition 3 *(McClung and Schaerer 2006)*
2) "Snow, Weather, and Avalanches: Observational Guidelines for Avalanche Programs in the United States (*American Avalanche Association 2010)*
Available here: http://www.fsavalanche.org/observational-guidelines/

Laboratory Equipment ***(required):***

A. Safety Equipment
- Avalanche Beacon
- Shovel
- Avalanche Probe

B. Transportation
- Skis or Split board with skins

C. Data Collection
- Field Book
- Crystal magnifier
- Crystal Card

D. Clothing
- Snow pants
- Snow jacket
- Gloves (2 pairs)

E. Optional
- Thermometers (2)
- Snow saw
- ECT cords

Class Schedule ***(subject to changes as the semester proceeds):***
Field-work will generally correlate to class lectures. Class topic schedules may vary. Reading and homework assignments will be made at class time.

Weather Conditions:
If concerned with cancellation of field session or canyon travel, due to weather conditions call the instructor before 11 AM, Friday morning; 801-518-2442.

Week 1	Jan 11th	Introduction / Nomenclature / Beacons/ Timeline
	Jan 13th	Field Day Nomenclature/ Beacons
Week 2	Jan 18th	Snowpack Stratigraphy Wx Triangle Pit write-up I
	Jan 20th	Snowpit analysis basic stability tests
Week 3	Jan 25th	Radiation/Snow Energy Balance Meteorology Snow Mechanics I
	Jan 27th	Field Day and Beacon test
Week 4	Feb 1st	Heat Transfer H20 / Metamorphism I
	Feb 3rd	Field Day
Week 5	Feb 8th	Atmospheric Snow Crystals Metamorphism II
	Feb 10th	Field Day
Week 6	Feb 15th	Mountain Meteorology Metamorphism III
	Feb 17th	Field Day
Week 7	Feb 22nd	Exam I Dust on Snow
	Feb 24th	Field Day
Week 8	Mar 1st	Snow Dynamics/Mechanics Tensile stress/strength Project Selection
	Mar 3rd	Field Day
Week 9	Mar 8th	Thermodynamics Tensile II
	Mar 10th	Field Day
Week 10	Mar 15th	*SPRING BREAK*
	Mar 17th	
Week 11	Mar 22nd	Wet Snow Avalanches Route Finding
	Mar 24th	Field Day
Week 12	Mar 29th	Guest Speaker Putting it all together
	Mar 31st	Field Day
Week 13	April 5th	Exam II
	April 7th	Field Day Dogs/Rescue Scenario
Week 14	April 12th	Projects I
	April 14th	Field Day
Week 15	April 19th	**Projects II**

GRADING	**%**
Weekly Quiz	10
Homework and Labs	30
Field Day Participation	15
Exam I	15
Exam II	15
Final Project	15
	100

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.