

Spring 2009 FOR 586 SNOW HYDROLOGY

The focus of this class is to examine snow processes and to relate those processes to the hydrologic cycle. We will try a blend of lectures and seminar-type discussion of current literature. In addition to the readings in a draft of a new Snow Hydrology textbook, we will discuss 1 or 2 journal articles per week. Students will be assigned the responsibility for preparing for and leading the discussion on the textbook chapters and journal articles.

WEEK OF	DISCUSSION TOPIC	READING
1/26	Orientation	D&R 1
2/02	Introduction	
	Snow Climatology and Snow Distribution	D&R 2
2/09	Snowpack Condition	D&R 3
2/16	Ground-based Snowfall and Snowpack Measurement	D&R 4
2/23	Remote Sensing of the Snowpack	D&R 5
3/02	Snowpack Energy Exchange: Basic Theory	D&R 6
3/09	Snowpack Energy Exchange: Topog. and Forest Effects	D&R 7
3/16	Snow Chemistry	D&R 8
3/23	Snowmelt Runoff	D&R 9
3/30	Spring Break	
4/06	Modeling Snowmelt Runoff	D&R 10
4/13		
4/20	The Snowmelt Runoff Model	D&R 11
4/27		
5/04	Snowpack Management and Modifications	D&R 12

Grades will be based on class participation, solved chapter problem sets, 2 term papers and a data analysis project. Both term papers will be at least 10 typed pages (Times New Roman 12, double spaced) with a minimum of 20 references. The first (due 3/21) can be on any aspect of snow-related meteorology, physics or measurement. The second (due 5/02) can be on any aspect of man's influence on snow or vice-versa. The +/- grading system will be used.

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at <http://www.umn.edu/SA/VP/SA/index.cfm?page?1321> .