

<b>SYLLABUS</b>		
SPRING 2009	FOR 385	POTTS
<b>WATERSHED HYDROLOGY</b>		
MEETING TIME: MWF 8-9 AM; Forestry 106		

<b>WEEK</b>	<b>DISCUSSION TOPIC</b>	<b>READING</b>
01 / 26	Introduction - Water in the West, NEPA, CWA and CWE's	Chapter 1
02 / 02	The Watershed / Statistical Methods	Handouts / Chapter 18
02 / 09	Precipitation and Interception	Chapter 2
02 / 16	No Class 2/16 - Evapotranspiration and Soil Water Storage	Chapter 3
02 / 23	Infiltration, Runoff & Streamflow <b>EXAM (02/27)</b>	Chapters 4, 17, 18
03 / 02	Groundwater	Chapters 5
03 / 09	Vegetation Management and Water Yield	Chapter 6
03 / 16	Cumulative Watershed Effects	Handouts
03 / 23	Surface erosion and Control <b>EXAM (03/27)</b>	Chapter 7
03 / 30	Spring Break	
04 / 06	Gullies and Mass Movement	Chapter 8
04 / 13	Sediment Yield and Channel Processes	Chapter 9
04 / 20	Channel Classification and Channel Stability	Chapter 10, Handouts
04 / 27	Water Quality, BMP's, SMZ Law,	Chapter 11, Handouts
05 / 04	Riparian and Water Quality Management	Chapters 12, 13
<b>TEXTBOOK:</b> Brooks, et al. 2003. Hydrology and the Management of Watersheds 3d Edition. Iowa State University Press. 502 pp.		
<b>GRADING:</b>		
	Quizzes and Homework	10% of final grade
	First Examination	30% of final grade
	Second Examination	30% of final grade
	Final Examination, May 11, 10 - 12AM	30% of final grade

I use the +/- grading system.

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.umt.edu/SA/VPSA/index.cfm?page?1321>

## **COURSE OBJECTIVES:**

1. Acquire a fundamental understanding of the hydrologic cycle; understand how climate, soils, vegetation and land-use affect the amount, timing and quality of water flow from a watershed.
2. Develop the ability to quantitatively determine or estimate the magnitude of hydrologic entities with emphasis on small watersheds. Become familiar with analytical procedures for evaluating precipitation, evapotranspiration, infiltration, and streamflow.
- 3 Understand how hydrologic information can be used in land management, including forest resource management; determine where water resource management objectives are compatible and where they conflict with other natural resource management objectives.
4. Understand the role of watershed management in dealing with cumulative watershed effects and the relationship between watershed management and multiple use in planning and implementing natural resource programs.
5. Become familiar with State and Federal laws and requirements and current issues in watershed management and water resources.