FNR 4343C (Forest Water Resources)

Spring 2026 (3 credits)

Instructor

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Teaching Assistant

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Office hours with the instructor and TA are by appointment. Please communicate through the Canvas mail system to schedule a meeting or for other inquiries.

Course Meeting Times/Logistics

Lectures- Pre-recorded lectures will be available at the Canvas site for each weekly module the prior Tuesday. Please watch lectures before the in-person Monday morning discussion session.

Quizzes- Will include content from lectures and other readings/resources provided in each week's module. These will consist of short answer, multiple choice, and/or quantitative problems completed online (due every Friday at 11:59pm)

Discussion Sessions- Monday and (if needed) Wednesday during period 3 (9:35-10:25) in NZ 219. Discussions will typically be comprised of 30 minutes to discuss the week's materials and 20 to discuss a larger prompt provided in each module. Online discussion is encouraged but not required.

Lab Sessions- Monday period 7-9 (1:55-4:55) in NZ 219. Most lab sessions will be used to working on an assignment that will be due the following week. A few lab sessions will be used for field trips and exam review (see schedule below).

NOTE: Students must receive written approval from the instructor to submit assignments late or miss class. Late assignments without written approval will be penalized one letter grade per day.

Course Learning Objectives

- Students will develop an understanding of hydrological processes in forests and surrounding ecosystems
- Students will learn how forest management impacts water yield and water quality
- Students will learn how forestry and hydrologic data are collected
- Students will learn about ongoing research in forest hydrology and management

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Course Description

This course explores the hydrologic cycle, emphasizing hydrologic processes in forests and the impacts of forest structure and management on water quantity and quality. Halfway through the semester students will be able to describe and construct a water budget for a watershed and explain how various components of that budget are measured. Students will be able to describe how forests differ from other land uses in their influence on regional hydrologic systems, and how these differences vary with forest management. By the end of the semester, students will understand various aspects of water quality and how forest hydrology and management affect sedimentation, nutrient loading, eutrophication, anoxia, and ecosystem integrity. Students will become familiar with forest Best Management Practices (BMPs) developed to reduce negative environmental consequences. Experts from forest industry, the Florida Forest Service, engineering/environmental science firms, state Water Management Districts and conservation organizations will help explore current issues in forest water resources.

Course Prerequisites

SWS 3022 and SWS 3022L (Introduction to Soils in the Environment- Course and Lab)

Weekly Course Schedule

Week		Lecture/Discussion Topic	Lab Session
1:	1/12 - 1/16	Introduction/ Course Overview	**NO LAB**
2:	1/19 - 1/23	Water Cycle and Rainfall	**MLK Day (NO LAB)**
3:	1/26 - 1/30	Rainfall Probability	Excel Tutorial (Optional)
4:	2/2 - 2/6	Evapotranspiration (ET)	Rainfall Lab (due 2/13)
5:	2/9-2/13	Infiltration/Soil Water	ET Lab (due 2/20)
6:	2/16 - 2/20	Stream Hydrographs and Networks	Sweetwater Field Trip
7:	2/23 - 2/27	Groundwater/ Water Uses	Streamflow Lab (due 3/6)
8:	3/2 – 3/6	Wetlands and Karst	Groundwater Lab (due 3/13)
9:	3/9 – 3/13	Water Chemistry	Brooks Sink Field Trip
10:	3/16 – 3/20	**SPRING BREAK**	**SPRING BREAK**
11:	3/23 – 3/27	Midterm Review	**NO LAB**
12:	3/30 – 4/3	Nutrients and TMDLs	MIDTERM
13:	4/6 – 4/10	Stream and Wetland Biota	Nutrient Lab (due 4/17)
14:	4/13 – 4/17	Minimum Flows and Levels	Austin Cary Forest Field Trip
15:	4/20 – 4/22	Best Management Practices	Final Exam Review

Course Grading Structure

Fourteen weekly quizzes (2% each)	28%
Five lab reports (7% each; Due 2/13, 2/20, 3/6, 3/13, 4/17)	35%
Midterm Exam (During lab on 3/30)	15%
Final Exam (Cumulative, date TBD)	15%
Participation (In discussion and lab sessions)	7%

Grading Scale

A = 100-93%	A- = 90-93%	B+ = 90-87%	B = 87-83%	B- = 83-80%
C+ = 80-77%	C = 77-73%	C- = 73-70%	D+ = 70-67%	D = 67-63%
D- = 63-60%	E = <60%			

Recommended Textbooks

1. Forest Hydrology: An Introduction to Water and Forests. 2012. M Chang (3rd Edition)
2. Hydrology and the Management of Watersheds. 2012. K.N. Brooks, P.F. Ffolliott, J.A. Magner (4th Edition)

NOTE: Both textbooks are available online through the UF Library

Technical Support

UF Computing Help Desk & Ticket Number: All technical issues require a UF Helpdesk Ticket Number. The UF Helpdesk is available 24 hours a day, 7 days a week. http://helpdesk.ufl.edu/ | 352-392-4357

Academic Policies and Resources

Academic policies for this course are consistent with university policies. See https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/

Campus Health and Wellness Resources

Visit https://one.uf.edu/whole-gator/topics for resources that are designed to help you thrive physically, mentally, and emotionally at UF.

Please contact UMatterWeCare for additional and immediate support.

Software Use

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Privacy and Accessibility Policies

- Instructure (Canvas)
  - Instructure Privacy Policy
  - Instructure Accessibility
- Zoom
  - Zoom Privacy Policy
  - Zoom Accessibility