

COURSE SYLLABUS

Course Number and Name:	CE 455 Hydrology
Credits and Contact Hours:	3 hours of credit 3 hours of lecture per week Engineering Science
Instructor:	Professor Joshua Roundy, Ph.D., P.E.
Text:	Physical Hydrology by S. Lawrence Dingman, 3rd edition, 2015. (Optional).

Specific Course Information:

Catalog Listing:	An introduction to the fundamentals of hydrologic analysis. Subjects covered include collection and initial reduction of hydrologic data; rainfall-runoff relationships, hydrograph development; hydrologic routing, well equations and their application and hydrologic frequency analysis.
Prerequisite:	ENGL 101, ENGL 102 or ENGL 105. Co or pre-requisite: CE 330
Required/Elective:	Selected Elective

Specific Goals for the Course:

Outcomes of Instruction:	By the completion of this course, students should be able to complete the following actions: • Obtain a fundamental knowledge of hydrology and understand how it impacts engineering design • Work collaboratively with others to solve hydrologic problems • Apply the fundamentals of the hydrologic cycle to perform a hydrologic analysis of a watershed using current tools and methods
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Student Outcomes Addressed: 1, 4

Course Topics:

- Water and Energy balance
- Watersheds
- Frequency analysis in hydrology
- Precipitation
- Infiltration and runoff
- Streamflow
- Unit hydrographs
- Reservoir and channel routing
- Watershed modeling
- Evaporation
- Groundwater and aquifers

Most Recent Update:

Spring 2024