

COURSE SYLLABUS

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| 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: <ul style="list-style-type: none">• 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 |
| 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