

COURSE DETAIL

HYDROLOGY AND WATER RESOURCE ENGINEERING

Country

Ireland

Host Institution

University of Galway

Program(s)

University of Galway

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Civil Engineering

UCEAP Course Number

108

UCEAP Course Suffix**UCEAP Official Title**

HYDROLOGY AND WATER RESOURCE ENGINEERING

UCEAP Transcript Title

HYDRLOGY&WATER ENGR

UCEAP Quarter Units

4.00

UCEAP Semester Units

2.70

Course Description

This course explores the theory and practice of engineering hydrology and how these are applied to water resource engineering. Students learn to recognize where and why engineering hydrology techniques are needed in civil engineering; specify measurement systems for rainfall, streamflow, and evaporation and calculate evaporation rates using the Penman method; estimate single site flood frequencies and flood risks; analyze and interpret low flow data for the purposes of deciding the suitability of a water body as a source for water extraction or as a receiving water for an effluent; perform back routing and forward routing of flow hydrographs through lakes and reservoirs in order to solve either flooding or water resources problems; calculate flood hydrographs from given design rainfalls; and calculate drawdowns caused by specified pumping rates in an idealized aquifer and infer aquifer storativity and transmissivity values from pumping test data. Students also learn the application of hydrological principles to water.

Language(s) of Instruction

English

Host Institution Course Number

CE469

Host Institution Course Title

HYDROLOGY AND WATER RESOURCE ENGINEERING

Host Institution Campus

National University of Ireland, Galway

Host Institution Faculty

Host Institution Degree

Host Institution Department

Civil Engineering

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