

## 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 Course Details**

<http://www.nuigalway.ie/engineering-informatics/civil-engineering/currentstuden...>

## **Host Institution Campus**

National University of Ireland, Galway

## **Host Institution Faculty**

## **Host Institution Degree**

## **Host Institution Department**

Civil Engineering

**Course Last Reviewed**

2019-2020

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