COURSE DETAIL

PHYSICAL HYDROLOGY
Country Netherlands
Host Institution Utrecht University
Program(s) Utrecht University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Geography Earth & Space Sciences
UCEAP Course Number 107
UCEAP Course Suffix
UCEAP Official Title PHYSICAL HYDROLOGY
UCEAP Transcript Title PHYSICAL HYDROLOGY
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

When exploring the principal rules that govern the flow of water, this course considers the four major types of water: atmospheric, ground, soil, and surface. With human activity and prevailing climate conditions placing more pressure on our supply of water than ever before, there has never been a more important time to develop a sound understanding of the subject. Students are familiarized with the basic terms and major laws that describe steady-state water flow in the subsurface and at the surface. These major laws are the energy equation (Bernoulli's law), the water balance equation (continuity), and the flow equation (Darcy's law or the Darcy-Buckingham equation). Students also gain knowledge of some aspects of atmospheric water, such as the generation of precipitation, measurement of precipitation, and the estimation of evaporation, as well as several methods for estimating surface water discharges in small streams. The ability to calculate volume fluxes and/or volume flux densities for several steady-state water-flow cases determines the successful completion of the course. Students are expected to have a working knowledge of mathematical differentiation and integration. This course is best suited for students in Hydrology, Geography, or Earth Science fields.

Language(s) of Instruction
English

Host Institution Course Number
GEO2-4203

Host Institution Course Title
PHYSICAL HYDROLOGY

Host Institution Campus
Utrecht University

Host Institution Faculty
Geosciences

Host Institution Degree

Host Institution Department
Earth Sciences

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