

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 Course Details

<https://osiris-student.uu.nl/#/onderwijscatalogus/extern/cursus>

Host Institution Campus

Utrecht University

Host Institution Faculty

Geosciences

Host Institution Degree

Host Institution Department

Earth Sciences

Course Last Reviewed

2023-2024

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