

Course Number

GEO-210-01

Course Description

Groundwater accounts for 97% of the available freshwater on Earth and serves as a vital resource that supports the economies and ecosystems of the world - including providing much of the irrigation water that grows our food, supplying drinking water to over 2 billion people, and sustaining surface water bodies and groundwater dependent ecosystems. With the world's groundwater resources threatened by intensive groundwater pumping, environmental and climate change, and the release of contaminants into the environment, there is a pressing need to better understand and manage this resource. Groundwater hydrology is a highly interdisciplinary field that brings together the geologic and environmental sciences with engineering. This course will begin by exploring the environmental and geologic factors that influence the occurrence and movement of groundwater. We will then delve into the physical laws that govern groundwater flow and learn how to model these flows. Later in the course we will cover the role of groundwater in a range of geologic and ecological processes. We will also cover engineering applications of groundwater such as the hydraulics of pumping wells, land subsidence, and the movement of contaminants within aquifers. Students will leave this course with the fundamental knowledge needed to begin answering the scientific and engineering challenges related to our groundwater resources.

Academic Term

22/FA

Instructor

Stahl, Mason

Location & Meeting Time

Olin Building-306+ M/W/F 09:15AM-10:20AM LEC

Credits

1.00

Capacity

15

Total Students

10

Additional Information

<http://www.union.edu/Geology>

Common Curriculum

SCLB

GDQR

GETS

GNPS

Interdisciplinary Programs

Environmental Science & Policy

Academic Department

Geosciences

Field Of Study

Geosciences (GEO)