Course Number GEO-210-01 Course Description

Environmental Science & Policy

Academic Department

Geosciences Field Of Study Geosciences (GEO)

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 the 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