

CIV563 Hydrology and Hydro-climatology

Faculty of CIVIL AND ENVIRONMENT ENGINEERING – Elective course

Credit: 3 ECTS: 7.5



Course Description: "Hydrology and Hydro-climatology" (CIV563) is deeply rooted in sustainability. It explores the interconnections between hydrological processes, climate change, and sustainable water management. This course introduces students to advanced hydrological and climatological concepts, emphasizing the impact of climate variability on water systems and the need for sustainable approaches to managing water resources. By understanding these processes, students can contribute to sustainable development practices, ensuring the responsible use and management of water, which is essential for human well-being and environmental preservation. The course also delves into topics such as climate change, drought, flood management, and urban hydrology, which are critical for developing strategies that promote resilience in the face of climate challenges.

Course Outcomes:

- Understand the principles of hydrology and hydro-climatology and their role in sustainability.
- Solve complex problems related to climate change and water resource management.
- Critically analyze the impact of global climate change on hydrological systems.
- Apply advanced methods for collecting and analyzing hydrological and meteorological data.
- Develop sustainable water resource management strategies, including drought and flood risk mitigation.
- Incorporate knowledge of extreme weather events in designing resilient infrastructure.