

TIMETABLE ARRANGEMENT: Annual; 2nd Semester

CREDITS: 6

COURSE TEACHER(S): Dr. Lishan RAN

ASSESSMENT:

EXAMINATION 60 %	COURSEWORK 40 %
• 2 hours	• 1 individual essay • 2 individual exercises

OBJECTIVES:

The course is designed to introduce water as a resource, outline the hydrologic cycle and quantification of the water balance, discuss water use and supplies and evaluate the human impact upon water including runoff amount and quality.

COURSE SYNOPSIS:

This course begins with an introduction to water as a resource and the drainage basin hydrological cycle. The second part of the course focuses upon the use of water resources, including changing demand for water and explores possible solutions to the water problem. It also examines the issue of access to water. The human impact upon runoff and groundwater by means of dam construction and land-use change is studied. Finally, water quality including pollution and its impact upon water resources is explored.

LECTURE TOPICS:

- Water as a resource including the water balance and hydrologic cycle
- Changing patterns in demand, consumption and access
- Future water supplies: Supply vs demand management
- Runoff: The impact of forest, dams and urbanisation
- Groundwater problems
- Water quality and pollution

RECOMMENDED READING LIST:

- Davie, T. (2008). Fundamentals of Hydrology. Routledge.
- UNESCO (2018). Nature-Based Solutions for Water. The United Nations World Water Development Report (WWDR).
- Grigg, N.S. (2016). Integrated Water Resource Management: An Interdisciplinary Approach. Palgrave Macmillan.

Course Learning Outcomes (CLOs) After completing this course, students would be able to:		Alignment with Programme Learning Outcomes (PLOs)*						Course Assessment Methods
		1	2	3	4	5	6	
1	gain an understanding of water as a resource and the hydrologic cycle	✓						Essay, exercises & exam
2	develop awareness of water use and issues in the management of water resources	✓						Essay, exercises & exam
3	reflect upon the human impact on the resource		✓					Essay, exercises & exam
4	understand basic hydrologic and water-quality measurements and data	✓			✓			Essay, exercises & exam
5	analyse and interpret hydrologic/water-quality data from a range of sources				✓			Essay & exercises
6	develop reading and presentation skills						✓	Essay & exercises
7	think critically about water resource issues						✓	Essay & exercises
8	conduct basic hydrologic/water-quality measurements			✓				Field trip

***Geography Major Programme Learning Outcomes (PLOs)**

In order to meet the demands and challenges in this dynamic and ever-changing world, the Department has designed a series of well-structured and contemporary courses to cater to the different interests of students. Its courses are designed to align with the University's educational aims which hope to nurture future generations not only with a critical and intellectual mindset, but also with a passion to contribute to society in general.

After completing the programme, Geography Major students should be able to:

PLO1 critically analyse the geographical aspects of the relationship between people and the natural environment;

PLO2 demonstrate and develop an understanding of how these relationships have changed with space and over time;

PLO3 identify, collect and utilize primary and secondary data to investigate and analyse the issues and problems facing people, places and society;

PLO4 integrate, evaluate and communicate information from a variety of geographical and other sources;

PLO5 participate in promoting social, economic and environmental sustainability at the local, regional and global scales; and

PLO6 effectively apply a range of transferable skills in academic, professional and social settings.