

Course Name	Code\No.	Number of Credits			
		Theo.	Lab.	Train.	Credit
Introduction to Hydrology	HWR 100	2	-	-	2
Pre-Requests		-			

Course Objectives:

To introduce to the student the basic knowledge in the field of hydrology; Surface water, groundwater, Irrigation and drainage, water resources management, Urban water, and statistical hydrology.

Course Contents:

- 1- Introduction to the course, water in the Holy Quran, The unique properties of water, distribution of water on the earth, water resources in the Kingdom.
- 2- The hydrological cycle.
- 3- Precipitation: formation of rain, rain gauges, rain distribution over the valley.
- 4- Evaporation and transpiration: introduction and definitions, measuring devices, methods of calculation.
- 5- Runoff: Runoff measuring devices, methods for calculating runoff, flood protection structures.
- 6- Infiltration: Infiltration measuring devices, methods for estimating infiltration.
- 7- Soil: soil properties.
- 8- Groundwater: Types of aquifers and water wells.
- 9- Irrigation: Introduction to irrigation, famous irrigation methods, and their characteristics.
- 10- Urban water: water networks for water supply.

Course outcomes:

It is expected that the student will get Knowledge in:

- The topics taught in the water resources department.
- Get the basic knowledge in the hydrological cycle.
- The ability to understand water phenomena in nature.

Evaluation Method:

Students can be evaluated upon exams, class homework, and class discussions.

References:

- Linsley, R. K., Kohler, M. A. and Paulhus, J. L. (1982) Hydrology for engineers, McGraw Hill Book Company.
- Ward, R. C. (2000) Principles of hydrology, McGraw Hill Book Company (UK) Limited.
- ترجمة ف. اسبتي و ل. ك. اسماعيل (١٩٨٣) الهيدرولوجية الهندسية، مطابع جامعة البصرة ، العراق.