

Course Description Form

1. Course Name:	
Hydrology	
2. Course Code:	
CIV31106	
3. Semester / Year:	
first/ third	
4. Description Preparation Date:	
1 September 2025	
5. Available Attendance Forms:	
Class	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3/3	
7. Course administrator's name (mention all, if more than one name)	
Asst. Lect. Aya Luay Khalil aya.luay@muc.edu.iq	
8. Course Objectives	
Course Objectives	1. Understand the components and processes of the hydrologic cycle. 2. Learn methods for measuring temperature, wind, and precipitation. 3. Study stream flow characteristics and measurement of stage, velocity, and discharge, including rating curves. 4. Understand evaporation processes and measurement techniques. 5. Explore subsurface and groundwater flow in confined and unconfined aquifers. 6. Analyze hydrographs, including separation and unit hydrograph concepts. 7. Apply stream flow routing methods in hydraulic designs for spillways, sewers, reservoirs, and dams.
9. Teaching and Learning Strategies	
Strategy	- Introduce students to the definition of Hydrology. - Self-regulated learning (i.e., planning, monitoring and evaluating one's own learning process in the classwork / Class teamwork). - Practice testing (short question answers and exams). - Self-explanation (i.e., explaining to oneself how new information is related to old information or explain steps taken when solving a problem or a task).

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1.	3	Introduction	Hydrology	Theoretical	Several Ways (Exams + Assignments)
2.	3	Precipitation part 1	Precipitation	Theoretical	Several Ways (Exams + Assignments)
3.	3	Precipitation part 2	Precipitation	Theoretical	Several Ways (Exams + Assignments)
4.	3	Precipitation part 3	Precipitation	Theoretical	Several Ways (Exams + Assignments)
5.	3	Stream flow	Discharge	Theoretical	Several Ways (Exams + Assignments)
6.	3	Weirs	Discharge	Theoretical	Several Ways (Exams + Assignments)
7.	3	Stage-discharge relation	Discharge	Theoretical	Several Ways (Exams + Assignments)
8.	3	Trace discharge	Discharge	Theoretical	Several Ways (Exams + Assignments)
9.	3	Water losses	Head losses	Theoretical	Several Ways (Exams + Assignments)
10.	3	Runoff	Runoff	Theoretical	Several Ways (Exams + Assignments)
11.	3	Runoff	Runoff	Theoretical	Several Ways (Exams + Assignments)
12.	3	Hydrograph	Hydrograph	Theoretical	Several Ways (Exams + Assignments)
13.	3	Hydrograph	Hydrograph	Theoretical	Several Ways (Exams + Assignments)
14.	3	s-curve	s-curve	Theoretical	Several Ways (Exams + Assignments)
15.	3	SCS-CN method to estimate runoff	SCS-CN method to estimate runoff	Theoretical	Several Ways (Exams + Assignments)

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc

1. Course cumulative:

- a. Assignments: 10
- b. Quizzes: 10
- c. Midterm Exams: 20

2. Final Exam: 60

1. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Hydrology for Engineering by Linsley 1988
Main references (sources)	A textbook of HYDROLOGY, Dr.P.Jaya Rami Reddy 2013
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Hydrology Principles. Analysis. Design, H.M Raghunath 2006