

Republic of Iraq  
The Ministry Of Higher Education  
& Scientific Research

بسم الله الرحمن الرحيم



University: Diyala  
College: Agriculture  
Department: Soil and water  
resources department  
Stage: 4  
Lecturer name: Dr. Ahmed  
B. Khalaf  
. Qualification: PhD  
Place of work: Coll. Of Agriculture

## Flow up of implementation celli pass play

Course Instructor	Assis.Prof.Dr.Ahmed Bahjat Khalaf				
E-mail	ahmedkhalaf@uodiyala.edu.iq				
Title	Hydrology & Water Resource				
Course Coordinator	First Course				
Course Objective	dentification of the hydrological concept, water resources and their applications, movement of water from and methods of measurement, evaporation, surface salts, groundwater, Floods ,and knowledge of the water budget and its importance				
Course Description	Explanation of the hydraulic cycle, Precipitation and its forms and methods of measurement, Evaporation and atmospheric pressure and measurement, Swelling and its characteristics and measurement, Flood and Hydrograph and its use, groundwater and water, water balance				
Textbook	<ol style="list-style-type: none"> <li>1. Engineering Hydrology. 1992. Mohamed Suleiman Hassan and others. University of Al Mosul.Khalaf, Ahmed Bahjat. (2021).</li> <li>2. Water science.2008. Sahar Amin Katout. dar dijla</li> </ol>				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	(20%)	(15%)	(5%)		(60%)
General Notes	Type here general notes regarding the course				

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week	Date	Topics Covered	Practical Part
1		Introduction to Hydrology, Hydrological Cycle	Methods of measurement of Precipitation
2		Precipitation, runoff, basal flow, evaporation	Rainy data views
3		Loss of punctuation, loss of capture, loss of ground storage	Measurement and estimation of loss of water reservoirs
4		Deep-vein loss. The importance of loss in the calculation of the runoff	Means that can be used to reduce loss of evaporation from water surfaces
5		Evaporation and loss of water from aquifers	Measuring water level and its costs in waterways (rivers)
6		Surface runoff and how waterways form	Methods of measurement of irritation and evidence used in measuring the flow
7		Permanent watercourses, Intermittent waterways, Seasonal waterways	Calculus applications in groundwater movement
8		Loads and dissolved loads in waterways	Calculus applications in groundwater movement
9		underground water	Applications in runoff curves
10		Aquifers and their characteristics	Applications in standard hydrograph curves
11		hydrograph	Applications in flood hydrographic curves
12		Standard water chart and methods of extraction	Methods of separation of basal flow in the hydrograph
13		Floods, causes, risks	Methods of separation of basal flow in the hydrograph
14		Water resources and the importance of the water budget	Methods of separation of basal flow in the hydrograph