University of Salahaddin – College of engineering – Civil engineering Department

Module Name	Irrigation Engineering			Course Status	Elective
Frequency	Yearly in Spring semester	Code	1151	Credit point	5
Duration:	15 week – 1 semester			Module Language	English
Pre-requisites	NONE			Required Level	
Course Description	Introduction, Basic soil relation, soil texture, Flow of water into and through soils, Infiltration, Crop water requirement, When to irrigate and how much water to apply, Water use efficiency, Water measurement structures, Surface irrigation, Subsurface irrigation, Sprinkler irrigation, Drip irrigation				
Course Objectives	Course objective give information about Irrigation engineering and relation between water and soil and studies soil texture and their equations and find amount of water required to add to soil and studies flow water into and through soil. The course give students how we design irrigation channels and their classification and factor affecting on their design and crop water requirement and water use efficiency and studies methods of irrigation and benefits and defects for each methods .				
Learning Outcome	The learning outcomes of an engineering irrigation course typically aim to equip students with the knowledge and skills necessary to design, manage, and optimize irrigation systems for agricultural and environmental purposes 1. Understanding of Irrigation Principles: 2. Soil-Water-Plant Relationships 3. . Irrigation Systems Design 4. Use of Irrigation Technologies 5. Water Management and Conservation 6. Irrigation Project Planning				
Literature & text Books	Irrigation and Water Resources Engineering", 2005, by G. L. Asawa. - "Water Resources Engineering", 2005, by Larry W. Mays. - "Irrigation, Water Power and Water Resources Engineering", by Arora. - "irrigation principles and practices", by Hansen				
Type of Teaching	Theory Lectures		Tutorial	Practical	
	3 hr		1 hr		
Evalution Profile	Students are required to first midterm exam on 8-week, class room activities, quizzes, home works and final exam on week 15th. So that the final grade will be based upon the following criteria:				
	Midterm Exam (90 min written exam at week 8)				20 %
	Class Room Activities, quizes, assignments (during the course period)				20 %
	Final Course Exam	written exam (120 min written exam week 15)			60 %
Work load:	Total Work Load 150 hr		Class Attendence 60 hr	Self Studies 90 hr	