Faculty of Engineering & Technology

Design of Model Irrigation Structures

Information :

Course Code :	SCM 534	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Department of Structural Engineering & Construction Management

Area Of Study :

Upon successful completion of this course, the student should be able to:
- Understand the basic concepts and main principles
- Calculate the values of the essential terms

Regarding irrigation systems sprinkler irrigation systems rip irrigation systems "Misqa" design

Description :

Sprinkler irrigation: types, distribution uniformity and efficiency, Planning: sprinkler types and properties, Hydraulic design of main and lateral lines, Pumping needs, Drip irrigation: system elements, design basics, emitters selection, layout and network design, filters design and clogging, Irrigation system selection, ñMisqaòdesign: low pressure pipelines, concrete canals, pumping and intake works, Field structures.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	List the main items of irrigation systems
2 -	Describe the main concept of sprinkler irrigation systems
3 -	Describe the main concept of rip irrigation systems
4 -	Define the main terms of "Misqa" design
b.Intellectual Skills: :	
1 -	Analyze the system of sprinkler irrigation systems
2 -	Analyze the system of rip irrigation systems
3 -	Design the elements of "Misqa" design
c.Professional and Practical Skills: :	
1 -	Draw neat details of irrigation systems
2 -	Prepare technical reports for "Misqa" design
d.General and Transferable Skills: :	
1 -	Search for information and self-learning discipline

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Irrigation systems	8	6	2
Sprinkler irrigation systems	16	12	4

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Rip irrigation systems	16	12	4
"Misqa" design	16	12	4
Revision	4	3	1

Teaching And Learning Methodologies :

- Interactive Lec.
- Discussion
- Problem Solving
- Report / Presentation

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final Exam	40.00		
First Mid-term Exam	15.00		
Quizzes / Assig.	15.00		
Report / Present.	15.00		
Second Mid-term Exam	15.00		

Course Notes :

Handout notes on MOODLE

Recommended books :

"Irrigation and Drainage Engineering", ElSaie Moh. Yasser, Fattoh Ehab, 2004