

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, Misqa Design: low pressure pipelines, concrete canals, pumping and intake works, Field structures.

Course outcomes :

a. Knowledge and Understanding: :

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| 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: :

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| 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: :

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| 1 - | Draw neat details of irrigation systems |
| 2 - | Prepare technical reports for "Misqa" design |

d. General and Transferable Skills: :

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| 1 - | Search for information and self-learning discipline |
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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