

19CE4701D -IRRIGATION MANAGEMENT

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| Course Category: | Program Elective | Credits: | 3 |
| Course Type: | Theory | Lecture-Tutorial- Practical: | 3-0-0 |
| Prerequisites: | 19CE3602-Water resources Engineering | Continuous Evaluation: | 30 |
| | | Semester End Evaluation: | 70 |
| | | Total Marks: | 100 |

Course Outcomes

Upon successful completion of the course, the student will be able to:

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| CO1 | Understand various approaches in irrigation management | K2 |
| CO2 | Understand the capability of irrigable soils and management | K2 |
| CO3 | Societal approach to irrigation management | K2 |
| CO4 | Understand the provisions of irrigation and conflict resolution | K2 |
| CO5 | Understand the basic concepts of integrated water management | K2 |

Contribution of Course Outcomes towards achievement of Program Outcomes

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| CO1 | 2 | 2 | | | | 2 | 2 | 2 | | | | | | 2 |
| CO2 | 2 | 2 | | | | 1 | 2 | 1 | | | | | | 2 |
| CO3 | 2 | 2 | | | | 2 | 2 | 2 | | | | | | 2 |
| CO4 | 2 | 2 | | | | 2 | 2 | 2 | | | | | | 2 |
| CO5 | 2 | 2 | | | | 1 | 2 | 1 | | | | | | 2 |
| Avg. | 2 | 2 | | | | 2 | 2 | 2 | | | | | | 2 |

1- Low

2-Medium

3-High

Course Content

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| UNIT-1 | Introduction: Need for proper management of land and water resources. Planning of irrigation projects – Inadequacies in present approaches in canal irrigation management – command area development programmes. | CO1. |
| UNIT-2 | Soil Management: Classification of irrigable soils – soils-plant-water relationships – soil management. Water logging and salinity – water quality for irrigation – Reclamation of salt affected soils | CO2. |
| UNIT-3 | Irrigation Management: Irrigation management – Irrigation Management Matrix – Society and irrigation –perceptions of various stake holders on irrigation system performance. Livelihood and Production Thinking Philosophy – the different approaches. Macro and precision irrigation. | CO3 |
| UNIT-4 | Participatory irrigation management – Farmer’s management of irrigation system acts - conflict resolution. | CO4 |
| UNIT-5 | Legal aspects in water sharing and management – PC-CP - case studies Introduction to Integrated Water Resources Management (IWRM). | CO5 |

Learning Resources

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| Text Books | 1.Irrigation Theory and practice by A. M. MICHAEL Vicas publishing house pvt ltd. 2.Irrigation Water Management: Principles and Practce by Dilip Kumar Majumdar PHI Learning pvt.Ltd |
| Reference Books | 3.Chambers R, Canal Management, Oxford IBH. 4.VVN Murthy, Land and Water Management Engineering, Kalyani Publishers. |
| e-Resources& other digital material | 1. https://nptel.ac.in/courses/105/102/105102159/ 2. https://nptel.ac.in/courses/126/105/126105010/ |