#####  Annexure-IV

##### Academic Curriculum for Master of Technology in

**IRRIGATION WATER MANAGEMENT (IWM)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Teaching Scheme** | **Contact Hours per Week** | **Exam. Duration (Hrs.)** | **Relative****Weightage (%)** |
| **S.No** | **SUBJECT CODE** | **COURSE TITLE** | **SUBJECT AREA** | **CREDITS** | **L** | **T** | **P** | **Theory** | **Practical** | **CWS** | **PRS** | **MTE** | **ETE** | **PRE** |
| **1st YEAR I SEMESTER (AUTUMN)** |
| 1. | WRN-501 | System Design Techniques | PCC | 4 | 3 | 1 | 0 | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
| 2. | WRN-571 | Design of Irrigation Structures and Drainage Works | PCC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
| 3. | WRN-573 | Principles and Practices of Irrigation | PCC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
| 4. | WRN-575 | On Farm Development | PCC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  5. |  | Program Elective Course | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
| **Sub Total** | **20** |  |
| **II SEMESTER (SPRING)** |
| 1. | WRN-574 | Diagnostic Analysis | PCC | 2 | - | - | 4 | - | - | - | 50 | - | - | 50 |
| 2. |  | Program Elective Course  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
| 3. |  | Program Elective Course  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
| 4. |  | Program Elective Course  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
| 5. |  | Program Elective Course  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
| 6. | WRN-700 | Seminar | SEM | 2 | - | - | - | - | - | - | - | 100 | - | - |
| **Sub Total** | **20** |  |
| **Note:** *P.G. Diploma course in IWM shall be of ONE YEAR duration comprising of semesters I and II only, with a minimum credits of 40* |
| **2nd YEAR III SEMESTER (AUTUMN)** |
| 1. | WRN-701A | Thesis I | DIS | 12 | - | - | - | - | - | - | - | - | 100 | - |
| **Sub Total** | **12** |  |
| **\*** *to be continued and grade to be awarded in the next semester* |
| **IV SEMESTER (SPRING)** |
| 1. | WRN-701B | Thesis II (contd. From 3rd Semester) | DIS | 18 | - | - | - | - | - | - | - | - | 100 | - |
| **Sub Total** | **18** |  |
| **Total** | **70** |  |

**PROGRAMME ELECTIVES COURSES (IWM)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | WRN-503 | Water Resources Planning and Management  | PEC | 4 | 3 | 1 |  | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-504 | Applied Hydrology  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-513 | Earth and Rockfill Dams  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-516 | Rural and Urban Water Supply | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-520 | Environmental Impact Assessment of Water Resource Projects | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-522 | Climate Change and Water Resources | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-572 | Soil and Agronomy  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-576 | Operation Maintenance and Management of Irrigation Systems | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-577 | Water and Land Laws  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-578 | Rural Sociology and Irrigation Economics  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-579 | Evaluation of Irrigation Project  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-580 | Renewable Energy System Technology  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-581 | Water Quality Monitoring and Modeling  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-582 | Theory of Seepage | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-583 | Remote Sensing and GIS Applications in Agriculture  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-584 | Cropping System Modeling  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-585 | Environmental Impact of Irrigated Agriculture  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-586 | Groundwater Development and Management  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-587 | Watershed Development and Management  | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |
|  | WRN-598 | Smart Irrigation Systems | PEC | 4 | 3 | 1 | - | 3 | - | 20-35 | - | 20-30 | 40-50 | - |