

Master of Civil Engineering

FIRST SEMESTER

| Theoretical Courses | Subjects | | Periods/Weeks | | Marks | | Credit Points |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------|---------------|-----------|-------------|-----------|---------------|
| | Subject Code | Specialization Subject Names | Lecture | Sessional | Examination | Sessional | |
| Departmental / Specialization Basket | | Structural Engineering (SE) Soil Mechanics and Foundation Engineering (SMFE) Environmental Engineering (EE) | | | | | |
| Paper-I | PG / CE / T/ 111A | Dynamics of Structures (SE) | 3 | | 100 | | 3 |
| | PG / CE / T/ 111B | Wind Analysis and Design of Structures (SE) | | | | | |
| | PG / CE / T/ 111C | Advanced Foundation Engineering (SMFE) | | | | | |
| | PG / CE / T/ 111D | Water Supply and Treatment (EE) | | | | | |
| Paper-II | PG / CE / T/ 112A | Concrete Science and Technology (SE) | 3 | | 100 | | 3 |
| | PG / CE / T/ 112B | Repair and Rehabilitation of Structures (SE) | | | | | |
| | PG / CE / T/ 112C | Advanced Theory of Soil Mechanics(SMFE) | | | | | |
| | PG / CE / T/ 112D | Rock Mechanics and Tunneling (SMFE) | | | | | |
| | PG / CE / T/ 112E | Wastewater Treatment and Disposal (EE) | | | | | |
| Paper-III | PG / CE / T/ 113A | Advanced Structural Design (SE) | 3 | | 100 | | 3 |
| | PG / CE / T/ 113B | Bridge Engineering (SE) | | | | | |
| | PG / CE / T/ 113C | Slope Stability and Earthen Dam (SMFE) | | | | | |
| | PG / CE / T/ 113D | Geotechnics for Highway Engineering (SMFE) | | | | | |
| | PG / CE / T/ 113E | Seismic Design of Foundation (SMFE) | | | | | |
| | PG / CE / T/ 113F | Solid Waste Management (EE) | | | | | |
| <p>Note: The students have to select 3 subjects from the departmental/ specialization basket, i.e. one subject each from the list given in the baskets of Paper-I, Paper-II and Paper-III</p> | | | | | | | |

| Theoretical Courses | Subjects | | Periods/Weeks | | Marks | | Credit Points |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------|---------------|-----------|-------------|------------|---------------|
| | Subject Code | Subject Name | Lecture | Sessional | Examination | Sessional | |
| Inter-Disciplinary Basket | | | | | | | |
| Paper-IV | PG / CE / T / 114A | Theory of Elasticity and Elastic Stability | 3 | | 100 | | 3 |
| | PG / CE / T / 114B | Remote Sensing and its Application | | | | | |
| | PG / CE / T / 114C | Environmental Impact Assessment | | | | | |
| Paper-V | PG / CE / T / 115A | Computer Methods and Finite Element Analysis | 3 | | 100 | | 3 |
| | PG / CE / T / 115B | Sub Soil Investigation | | | | | |
| | PG / CE / T / 115C | Environmental Pollution and Management | | | | | |
| Paper-VI | PG / CE / T / 116A | Theory of Plates and Shells | 3 | | 100 | | 3 |
| | PG / CE / T / 116B | Advanced Hydrology and Groundwater | | | | | |
| | PG / CE / T / 116C | Environmental Management and Ecology | | | | | |
| | PG / CE / T / 116D | Water Pollution and Control | | | | | |
| | PG / CE / T / 116E | Advanced mathematics | | | | | |
| <p>Note: The students have to select 3 subjects from the inter-departmental basket, i.e. one subject each from the list given in the baskets of Paper-IV, Paper-V and Paper-VI</p> | | | | | | | |
| Sessional Courses | | | | | | | |
| Sessional 1 | PG / CE / S / 111 | Laboratory | | 4 | | 100 | 3 |
| Sessional 2 | PG / CE / S / 112 | Assignment | | 3 | | 100 | 3 |
| | | | 18 | 7 | 600 | 200 | 24 |

Total Periods/Week = 25

Total Marks = 800

SECOND SEMESTER

| Theoretical Courses | Subjects | | Periods/Weeks | | Marks | | Credit Points |
|--------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------|---------------|-----------|-------------|-----------|---------------|
| | Subject Code | Specialization Subject Names | Lecture | Sessional | Examination | Sessional | |
| Departmental / Specialization Basket | | Structural Engineering (SE) Soil Mechanics and Foundation Engineering (SMFE) Environmental Engineering (EE) | | | | | |
| Paper-VII | PG / CE / T/ 127A | Analysis and Design of Tall Structures (SE) | 3 | | 100 | | 3 |
| | PG / CE / T/ 127B | Earthquake Analysis and Design of Structures (SE) | | | | | |
| | PG / CE / T/ 127C | Soil Dynamics and machine Foundation (SMFE) | | | | | |
| | PG / CE / T/ 127D | Instrumentation and Case Histories in Geotechnical engineering (SMFE) | | | | | |
| | PG / CE / T/ 127E | Air Pollution and Control (EE) | | | | | |
| | PG / CE / T/ 127F | Noise Pollution (EE) | | | | | |
| Paper-VIII | PG / CE / T/ 128A | Pre cast and Pre stressed Concrete Structures (SE) | 3 | | 100 | | 3 |
| | PG / CE / T/ 128B | Advanced Concrete Science and Technology (SE) | | | | | |
| | PG / CE / T/ 128C | Retaining Structures and Underground Construction (SMFE) | | | | | |
| | PG / CE / T/ 128D | Analytical Geo mechanics(SMFE) | | | | | |
| | PG / CE / T/ 128E | Process Design in Environmental Engineering (EE) | | | | | |
| | PG / CE / T/ 128F | Hydraulics for Environmental Process Design (EE) | | | | | |
| Paper-IX | PG / CE / T/ 129A | Offshore Structures (SE) | 3 | | 100 | | 3 |
| | PG / CE / T/ 129B | Plastic and Limit State Design of Structures (SE) | | | | | |
| | PG / CE / T/ 129C | Ground Improvement Techniques(SMFE) | | | | | |
| | PG / CE / T/ 129D | Environmental Geo technique (SMFE) | | | | | |
| | PG / CE / T/ 129E | Industrial Waste Water treatment (EE) | | | | | |
| | PG / CE / T/ 129F | Sanitary Microbiology and Biochemistry(EE) | | | | | |

Note: The students have to select 3 subjects from the departmental/ specialization basket, i.e. one subject each from the list given in the baskets of Paper-VII, Paper-VIII and Paper-IX

| Inter-Disciplinary Basket | Subject Code | Subject Name | Lecture | Sessional | Examination | Sessional | |
|-----------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------|-----------|-----------|-------------|------------|-----------|
| Paper-X | PG / CE / T/ 1210A | Advanced computer Methods and Finite Element Analysis | 3 | | 100 | | 3 |
| | PG / CE / T/ 1210B | Structural Optimization | | | | | |
| | PG / CE / T/ 1210C | Hazardous Waste Management | | | | | |
| | PG / CE / T/ 1210D | Coastal and Offshore Geo technology | | | | | |
| Note: The students have the freedom to choose one subject from the list under Paper-X. | | | | | | | |
| Sessional Courses | | | | | | | |
| Sessional 1 | PG / CE / S / 121 | Term Paper Leading to Thesis | | 3 | | 100 | 3 |
| Sessional 2 | PG / CE / S / 122 | Seminar | | 3 | | 100 | 3 |
| | | | 12 | 6 | 400 | 200 | 18 |

Total Periods/Week = 18

Total Marks = 600

THIRD and FOURTH SEMESTER

| Courses | | | | | | | |
|---------|-------------------|---------------------|--|-----------|--|------------|-----------|
| 1 | PG / CE / TH / 21 | Thesis Work | | 16 | | 300 | 12 |
| 2 | PG / CE / VV/ 22 | Viva-Voce on Thesis | | | | 100 | |
| | | | | 16 | | 400 | 12 |

Total Periods/Week = 16

Total Marks = 400