## 13. Courses of Study and Scheme of Assessment
## ME INFRASTRUCTURE ENGINEERING

**(2015 REGULATIONS)**
**(Minimum No. of credits to be earned: 74*)**

| Course Code | Course Title | Hours/Week | | | Credits | Maximum Marks | | | CAT |
|---|---|---|---|---|---|---|---|---|---|
| | | Lecture | Tutorial | Practical | | CA | FE | Total | |
| **I SEMESTER** | | | | | | | | | |
| 15CN01 | Applied Statistics and Reliability | 2 | 2 | - | 3 | 50 | 50 | 100 | FC |
| 15CN02 | Concepts of Structural & Geotechnical Engineering | 3 | - | - | 3 | 50 | 50 | 100 | FC |
| 15CN03 | Pavement Analysis Design & Evaluation | 3 | - | - | 3 | 50 | 50 | 100 | PC |
| 15CN04 | Reinforced concrete Design | 3 | - | - | 3 | 50 | 50 | 100 | PC |
| 15CN05 | Computer Analysis of Structures | 3 | 2 | - | 4 | 50 | 50 | 100 | PC |
| 15CN51 | Concrete Technology and Structural Engineering Laboratory | - | - | 4 | 2 | 100 | - | 100 | PC |
| 15CN61 | Industry Visit & Technical Seminar | - | - | 4 | 2 | 100 | - | 100 | EEC |
| | **Total 26 Hrs** | **14** | **4** | **8** | **20** | **450** | **250** | **700** | |
| **II SEMESTER** | | | | | | | | | |
| 15CN06 | Structural Steel Design | 3 | - | - | 3 | 50 | 50 | 100 | PC |
| 15CN07 | Construction Project Management | 3 | - | - | 3 | 50 | 50 | 100 | PC |
| 15CN08 | Traffic Engineering and Transport Planning | 3 | - | - | 3 | 50 | 50 | 100 | PC |
| 15CN09 | Geographic Information Systems | 3 | - | - | 3 | 50 | 50 | 100 | PC |
| 15CN10 | Advanced Environmental Engineering Systems | 3 | - | - | 3 | 50 | 50 | 100 | PC |
| 15CN | Professional Elective - 1 | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN52 | Computer Aided Infrastructure Planning and Analysis Laboratory | - | - | 4 | 2 | 100 | - | 100 | PC |
| | **Total 22 Hrs** | **18** | **-** | **4** | **20** | **400** | **300** | **700** | |
| **III SEMESTER** | | | | | | | | | |
| 15CN | Professional Elective – 2 | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN | Professional Elective – 3 | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN | Professional Elective – 4 | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN | Professional Elective – 5 | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN | Professional Elective – 6 | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN53 | GIS Laboratory | - | - | 4 | 2 | 100 | - | 100 | PC |
| 15CN71 | Project Work I | - | - | 6 | 3 | 100 | - | 100 | EEC |
| | **Total 25 Hrs** | **15** | **-** | **10** | **20** | **450** | **250** | **700** | |
| **IV SEMESTER** | | | | | | | | | |
| 15CN72 | Project Work II | - | - | 28 | 14 | 50 | 50 | 100 | EEC |
| **ELECTIVE THEORY COURSES(Six to be opted)** | | | | | | | | | |
| 15CN21 | Environmental Impact Assessment | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN22 | Bridge Engineering | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN23 | Foundation Structures | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN24 | Advanced Concrete Technology | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN25 | Prestressed Concrete Structures | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN26 | Infrastructure Management | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN27 | Optimization Techniques | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN28 | Maintenance and Rehabilitation of Structures | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN29 | Modern Materials for Construction | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN30 | Experimental Techniques and Instrumentation | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN31 | Financial Management and Accounting | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN32 | Prefabricated Structures | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN33 | City Planning and Urban Design | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN34 | Organization Behavior | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN35 | Modern Surveying | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN36 | Geosynthetics | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN37 | Corrosion Engineering | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN38 | Remote Sensing | 3 | - | - | 3 | 50 | 50 | 100 | PE |
| 15CN39 | Advances in Spatial Information Technology and Applications | 3 | - | - | 3 | 50 | 50 | 100 | PE |

* Indicated is the minimum number of credits to be earned by a student.

**CAT – Category; FC – Foundation Course; PC – Professional Core; PE - Professional Elective**
**EEC – Employability Enhancement Course**

**SCIENCE ELECTIVES**

| | |
|---|---|
| 15ID01 | Micro Electro Mechanical Systems (MEMS) |
| 15ID02 | Sensors for Engineering Applications |
| 15ID03 | Laser Processing of Materials |
| 15ID04 | Plasma Technology |
| 15ID05 | Nanosensor and its Applications |
| 15ID06 | Nano Magnetism and Spintronics |
| 15ID07 | Corrosion Science and Engineering |
| 15ID08 | Instrumental Methods of Chemical Analysis |
| 15ID09 | Polymer Science and Technology |
| 15ID10 | Nanomaterials and Nanotechnology |
| 15ID11 | Thin Film Technology |

**HUMANITIES AND LANGUAGES ONE CREDIT COURSES**

| | |
|---|---|
| 15OK01 | Research Writing in Engineering Sciences |
| 15OK02 | Indian Ethos and Human Values |
| 15OK03 | Personality Development |
| 15OK04 | Financial Accounting and Cost Accounting |