**NBKR INSTITUTE OF SCIENCE & TECHNOLOGY :: VIDYANAGAR**

*(AUTONOMOUS)*

**CIVIL ENGINEERING**

SCHEME OF INSTRUCTION AND EVALUATION

(With effect from the batch admitted in the academic year 2013-2014)

**III YEAR OF FOUR YEAR B.TECH. DEGREE COURSE – I SEMESTER**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.  No. | Course  Code | Course Title | Contact  Hours/  Week | | | Credits | Evaluation | | | | | | | | | | | | |
| Sessional  Test-I | | | Sessional  Test-II | | | | Total Sessional Marks (Max. 40) | Semester  End Examination | | | Max.  Total Marks | |
| **THEORY** | L | P | T |  | Duration  in Hours | | Max.  Marks | Duration  in Hours | Max.  Marks | | 0.8(Better of two sessional tests)  +  0.2(Other) | | Duration  in Hours | Max.  Marks | |  | |
| 1 | 13CE3101 | Structural Analysis - I | 3 | - | 1 | 4 | 2 | | 40 | 2 | 40 | | 3 | | 60 | 100 | |
| 2 | 13CE3102 | R.C.C. Structural Design – I | 3 | - | 1 | 4 | 2 | | 40 | 2 | 40 | | 3 | | 60 | 100 | |
| 3 | 13CE3103 | Steel Structural Design | 3 | - | 1 | 4 | 2 | | 40 | 2 | 40 | | 3 | | 60 | 100 | |
| 4 | 13CE3104 | Foundation Engineering | 3 | - | 1 | 4 | 2 | | 40 | 2 | 40 | | 3 | | 60 | 100 | |
| 5 | 13CE3105 | Transportation Engineering - II | 4 | - | - | 4 | 2 | | 40 | 2 | 40 | | 3 | | 60 | 100 | |
| 6 | 13CE3106 | Advanced Hydraulics | 4 | - | - | 4 | 2 | | 40 | 2 | 40 | | 3 | | 60 | 100 | |
|  | | **PRACTICALS** |  |  | | | | | | | |  | | |  | | | | |
| 1 | 13CE31P1 | Soil Mechanics Laboratory | - | 3 |  | 2 | | - | - | - | - | | Day-to-day Evaluation and a test | | 3 | | 60 | | 100 |
| 2 | 13CE31P2 | Material Testing Laboratory | - | 3 |  | 2 | | - | - | - | - | | 3 | | 60 | | 100 |
|  |  | **TOTAL** | **20** | **06** | **04** | **28** | |  |  |  |  | |  | |  | | **800** |

**13CE31P2 - MATERIAL TESTING LABORATORY**

|  |  |  |  |
| --- | --- | --- | --- |
| **Course category:** | Program core | **Credits:** | 2 |
| **Course Type:** | Theory | **Lecture - Tutorial - Practical:** | 0 - 0 - 3 |
| **Prerequisite:** | **Strength of materials** | **Sessional Evaluation :**  **Univ.Exam Evaluation:**  **Total Marks:** | 40  60  100 |

|  |  |  |
| --- | --- | --- |
| **Course Outcomes** | CO1 | Mild steel for tension, direct shear, hardness and impact load |
| CO2 | HYSD bar for tension, hardness, torsion and Wood for compression test |
| CO3 | Springs, and rolled steel joist for bending. |
| CO4 | Beams for deflection and elastic modulus. |
| CO5 | Close-coiled helical springs for deflection |
| **Course Content** | **LIST OF EXPERIMENTS**   1. Tension test on Mild Steel bar. 2. Tension test on HYSD bar. 3. Compression test on wood. 4. Direct shear test on Mild Steel. 5. Rockwell and Brinell Hardness tests. 6. Charpy and Izod Impact tests. 7. Bending test on Rolled Steel Joist. 8. Bending test on carriage springs. 9. Torsion test-Determination of Rigidity modulus (G). 10. Deflection test on simply supported beam-Determination of Elastic modulus (E). 11. Deflection test on fixed beam- Determination of Elastic modulus (E). 12. Deflection test on close-coiled helical springs. 13. Deflection test on over hanging beam - Determination of Elastic modulus (E). | |