### Semester – IV

<table>
<thead>
<tr>
<th>Subject</th>
<th>Contact Hours/Week (L &amp; T)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THEORY</strong></td>
<td></td>
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<tr>
<td>1. CE 2201</td>
<td>Structural Mechanics I</td>
<td>3</td>
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<tr>
<td>2. CE 2202</td>
<td>Fluid Mechanics I</td>
<td>4</td>
</tr>
<tr>
<td>3. CE 2203</td>
<td>Surveying I</td>
<td>4</td>
</tr>
<tr>
<td>4. CE 2204</td>
<td>Disaster Mitigation and Earthquake Engg.</td>
<td>3</td>
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<tr>
<td>5. AM 2203 A</td>
<td>Numerical Methods</td>
<td>3</td>
</tr>
<tr>
<td>6. EcE 2203 A</td>
<td>Electronics and Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total of Theory</strong></td>
<td></td>
<td>20</td>
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| **PRACTICAL** | | |
| 7. CE 2401 | Surveying Practice I | 4 | 3* |
| 8. EE 2403 A | Electrical Engineering Lab | 3 | 2 |
| **Total of Practicals** | | 7 | 5 |

**Total for the Semester IV**: 27 25

**Total for Part – II**: 50

* Includes local/outside Surveying Camp.
SEMESTER – VI

CE-3201 : Water Resources Engineering I


Suggested Books:

CE-3202 : Structural Design II


Suggested Books:

CE-3203 : Geotechnical Engineering - I

Introduction to geotechnical problems in civil engineering; Soil types and formation; Simple soil properties, Grain size distribution, Atterberg limits; Soil identification and classification; Total, effective and neutral stresses; Darcy’s law; Permeability and capillarity of soil, Seepage, Flow nets, Piping, Design of filters; Stress distribution in soils; Laboratory compaction and field compaction; One-dimensional consolidation and simple settlement analysis; Shear strength; Determination of total
Equipments, Earthmoving, Excavating, Hauling, Compacting, Drilling and Blasting, Grouting, Conveying and Dewatering Equipments. Aggregate Cement Concrete and Asphatt Concrete Plants.

Suggested Books:

OPEN ELECTIVES (Humanities)

HU-3201: History of Science and Technology


Suggested Books:
Water turbines: Selection of water turbines, scroll castings and draft tubes, speed regulation and governing of turbines. Power house: Types of power house, substructure and superstructure. General arrangement and space requirements for standard power house facilities.

Suggested Books:

CE-4107: Analysis and Design of Pavements


Suggested Books:

CE-4109: Environmental Pollution and Control


Suggested Books:
3. Peavy, H.S., Rowe D.R. and Techobanoglous, G. 'Environmental Engg'.
4. Sincero and Sincero. 'Environmental Engg. – A Design Approach.' Masters
   G.M. Environmental Science and Engg.

(B) List of Subjects for Elective – II, V and VI
(Opt any one for each elective II, V and VI)

CE – 5118 : Soil Structure Interaction

Contact pressure distribution; Foundation models; Model parameters and their evaluation; Analysis of beams and plates resting on foundation soils, Soil Structure interaction studies pertaining to buried structures; Analysis and design of deep foundation; Modern trends in design of earth retaining structures

CE – 5123 : Elasticity and Experimental Stress Analysis


CE – 5124 : Stability of Structures


CE - 5125 : Metal and Cable Structures


CE - 5126 : Structural Dynamics