

# FACULTY OF ENGINEERING & TECHNOLOGY

Name of the Programme: Master of Technology in Civil Engineering (Transportation Engineering/ Structural Engineering/ Remote Sensing and GIS)

Session: 2025-26 onwards

| Semester/Year | Council Code (If any) | Subject Code (If already existing) | Nomenclature                                              | Theory/ Practical/ | Core/ AECC/ SEC/VAC / DSE/ GE | Theory/Practical (Result Combined or Separate) | L         | T        | P        | Credits   | Theory External | Max | Pass | Attendance Marks | Mid Term Weightage | Assignment | Professional Activities | Max | Pass | Demonstration/Presentation | Viva-voce | Max | Pass | Attendance | Project/Laboratory Work/ Lab Performance | Midterm oral Examination/ / assesment | Max | Pass | Overall Pass Marks | End Term Examination Overall Passing Criteria:<br><br>Theory: [External+Internal] or Practical: [External+Internal] |
|---------------|-----------------------|------------------------------------|-----------------------------------------------------------|--------------------|-------------------------------|------------------------------------------------|-----------|----------|----------|-----------|-----------------|-----|------|------------------|--------------------|------------|-------------------------|-----|------|----------------------------|-----------|-----|------|------------|------------------------------------------|---------------------------------------|-----|------|--------------------|---------------------------------------------------------------------------------------------------------------------|
| I/I           | -                     | 13160138                           | Research Methodology & IPR                                | Theory             | Core                          | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160107                           | Seminar                                                   | Practical          | Core                          | Separate                                       | 0         | 0        | 2        | 1         | -               | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                    | 20  | 8    | 25                 | External+Internal                                                                                                   |
|               |                       |                                    | <b>Transportation Engineering</b>                         |                    |                               |                                                |           |          |          |           |                 |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                       |     |      |                    |                                                                                                                     |
| I/I           | -                     | 13160132                           | Pavement Materials                                        | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160133                           | Urban Transportation System Planning                      | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160134                           | Geometric Design of Transportation Facilities             | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160135                           | Ground Improvement                                        | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160136                           | Pavement Materials Lab                                    | Practical          | DSE                           | Separate                                       | 0         | 0        | 2        | 1         | -               | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                    | 20  | 8    | 25                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160137                           | Geometric design Lab                                      | Practical          | DSE                           | Separate                                       | 0         | 0        | 2        | 1         | -               | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                    | 20  | 8    | 25                 | External+Internal                                                                                                   |
|               |                       |                                    | <b>Structural Engineering</b>                             |                    |                               |                                                |           |          |          |           |                 |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                       |     |      |                    |                                                                                                                     |
| I/I           | -                     | 13160114                           | Advance Pre-Stressed Concrete Design                      | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
|               | -                     | 13160115                           | Structural Dynamics                                       | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160116                           | Matrix Methods of Structural Analysis                     | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160117                           | Design of Concrete Structural Systems                     | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160118                           | Matrix Methods of Structural Analysis Lab (STAAD PRO)     | Practical          | DSE                           | Separate                                       | 0         | 0        | 2        | 1         | -               | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                    | 20  | 8    | 25                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160119                           | Design of Concrete and Structural Systems Lab (STAAD PRO) | Practical          | DSE                           | Separate                                       | 0         | 0        | 2        | 1         | -               | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                    | 20  | 8    | 25                 | External+Internal                                                                                                   |
|               |                       |                                    | <b>Remote Sensing &amp; GIS</b>                           |                    |                               |                                                |           |          |          |           |                 |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                       |     |      |                    |                                                                                                                     |
| I/I           | -                     | 13160143                           | Principles of Remote Sensing                              | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160108                           | Geographical Information Systems                          | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160139                           | Photogrammetry                                            | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160140                           | Application Of Remote Sensing                             | Theory             | DSE                           | Separate                                       | 3         | 0        | 0        | 3         | 60              | 24  | 5    | 20               | 5                  | 10         | 40                      | 16  | -    | -                          | -         | -   | -    | -          | -                                        | -                                     | -   | -    | 50                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160141                           | Geographical Information Systems Lab                      | Practical          | DSE                           | Separate                                       | 0         | 0        | 2        | 1         | -               | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                    | 20  | 8    | 25                 | External+Internal                                                                                                   |
| I/I           | -                     | 13160142                           | Photogrammetry Lab                                        | Practical          | DSE                           | Separate                                       | 0         | 0        | 2        | 1         | -               | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                    | 20  | 8    | 25                 | External+Internal                                                                                                   |
|               |                       |                                    | <b>Total Credits for the Semester</b>                     |                    |                               |                                                | <b>15</b> | <b>0</b> | <b>6</b> | <b>18</b> |                 |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                       |     |      |                    |                                                                                                                     |
| II/I          | -                     | 13160238                           | Minor Project                                             | Practical          | Core                          | Separate                                       | 0         | 0        | 6        | 3         | -               | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                    | 20  | 8    | 25                 | External+Internal                                                                                                   |

| Semester/Year | Council Code<br>(If any) | Subject Code<br>(If already existing) | Nomenclature                                      | Theory/<br>Practical/ | Core/<br>AECC/<br>SEC/VAC<br>/<br>DSE/<br>GE | Theory/Practical<br>(Result Combined or Separate) | L  | T | P  | Credits | Max | Pass | Attendance Marks | Mid Term Weightage | Assignment | Professional Activities | Max | Pass | Demonstration/Presentation | Viva-voce | Max | Pass | Attendance | Project/Laboratory Work/ Lab Performance | Midterm oral Examination / assesment | Max | Pass | Overall Pass Marks | End Term Examination Overall Passing Criteria:<br><br>Theory:<br>[External+Internal]<br>or<br>Practical:<br>[External+Internal] |  |
|---------------|--------------------------|---------------------------------------|---------------------------------------------------|-----------------------|----------------------------------------------|---------------------------------------------------|----|---|----|---------|-----|------|------------------|--------------------|------------|-------------------------|-----|------|----------------------------|-----------|-----|------|------------|------------------------------------------|--------------------------------------|-----|------|--------------------|---------------------------------------------------------------------------------------------------------------------------------|--|
| II/I          |                          |                                       | Transportation Engineering                        |                       |                                              |                                                   |    |   |    |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |  |
| II/I          | -                        | 13160232                              | Analysis and Design of Pavement                   | Theory                | DSE                                          | Separate                                          | 3  | 1 | 0  | 4       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160233                              | Transport Economics                               | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160234                              | Traffic Engineering and Management                | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160235                              | Airport Infrastructure, Planning and Design       | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160236                              | Pavement Design Lab                               | Practical             | DSE                                          | Separate                                          | 0  | 0 | 2  | 1       | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                   | 20  | 8    | 25                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160237                              | Traffic Lab                                       | Practical             | DSE                                          | Separate                                          | 0  | 0 | 2  | 1       | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                   | 20  | 8    | 25                 | External+Internal                                                                                                               |  |
|               |                          |                                       | Structural Engineering                            |                       |                                              |                                                   |    |   |    |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |  |
| II/I          | -                        | 13160214                              | Finite Element Analysis                           | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160215                              | Theory of Elasticity and Plasticity               | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160216                              | Limit State Design of Steel Structures            | Theory                | DSE                                          | Separate                                          | 3  | 1 | 0  | 4       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160217                              | Earthquake Resistant Design                       | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160218                              | Structural Engineering Lab (CASTING)              | Practical             | DSE                                          | Separate                                          | 0  | 0 | 2  | 1       | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                   | 20  | 8    | 25                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160239                              | Finite Element Analysis Lab                       | Practical             | DSE                                          | Separate                                          | 0  | 0 | 2  | 1       | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                   | 20  | 8    | 25                 | External+Internal                                                                                                               |  |
|               |                          |                                       | Remote Sensing & GIS                              |                       |                                              |                                                   |    |   |    |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |  |
| II/I          | -                        | 13160240                              | Geospatial Data Processing and Modelling          | Theory                | DSE                                          | Separate                                          | 3  | 1 | 0  | 4       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160241                              | Satellite Image Processing                        | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160242                              | Advanced GIS                                      | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        |                                       | GNSS in Surveying                                 | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160244                              | Advanced GIS Lab                                  | Practical             | DSE                                          | Separate                                          | 0  | 0 | 2  | 1       | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                   | 20  | 8    | 25                 | External+Internal                                                                                                               |  |
| II/I          | -                        | 13160245                              | Satellite Image Processing Lab                    | Practical             | DSE                                          | Separate                                          | 0  | 0 | 2  | 1       | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                   | 20  | 8    | 25                 | External+Internal                                                                                                               |  |
|               |                          |                                       | Total Credits for the Semester                    |                       |                                              |                                                   | 12 | 1 | 10 | 18      |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |  |
| III/II        | -                        | 13160367                              | Dissertation Phase-I                              | Practical             | Core                                         | Separate                                          | 0  | 0 | 12 | 6       | -   | -    | -                | -                  | -          | -                       | -   | -    | 20                         | 10        | 30  | 12   | 5          | 5                                        | 10                                   | 20  | 8    | 25                 | External+Internal                                                                                                               |  |
|               |                          |                                       | Transportation Engineering                        |                       |                                              |                                                   |    |   |    |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |  |
| III/II        | -                        | 13160357                              | Intelligent Transportation Systems                | Theory                | DSE                                          | Separate                                          | 3  | 1 | 0  | 4       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
|               |                          |                                       | Choose one of the following                       |                       |                                              |                                                   |    |   |    |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |  |
| III/II        | -                        | 13160355                              | Construction Project Management & BOT             | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| III/II        | -                        | 13160368                              | Traffic Management and Road safety                | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| III/II        | -                        | 13160359                              | Highway Construction Practices                    | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
|               |                          |                                       | Choose one of the following                       |                       |                                              |                                                   |    |   |    |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |  |
| III/II        | -                        | 13160369                              | Pavement Evaluation, Rehabilitation & Maintenance | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| III/II        | -                        | 13160363                              | Environment Impact Assessment                     | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |
| III/II        | -                        | 13160365                              | Bridge Engineering                                | Theory                | DSE                                          | Separate                                          | 3  | 0 | 0  | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |  |

| Semester/Year | Council Code<br>(If any) | Subject Code<br>(If already existing) | Nomenclature                                      | Theory/<br>Practical/ | Core/<br>AECC/<br>SEC/VAC<br>/<br>DSE/<br>GE | Theory/Practical<br>(Result Combined or Separate) | L | T | P        | Credits | Max | Pass | Attendance Marks | Mid Term Weightage | Assignment | Professional Activities | Max | Pass | Demonstration/Presentation | Viva-voce | Max | Pass | Attendance | Project/Laboratory Work/ Lab Performance | Midterm oral Examination / assesment | Max | Pass | Overall Pass Marks | End Term Examination Overall Passing Criteria:<br><br>Theory:<br>[External+Internal]<br>or<br>Practical:<br>[External+Internal] |
|---------------|--------------------------|---------------------------------------|---------------------------------------------------|-----------------------|----------------------------------------------|---------------------------------------------------|---|---|----------|---------|-----|------|------------------|--------------------|------------|-------------------------|-----|------|----------------------------|-----------|-----|------|------------|------------------------------------------|--------------------------------------|-----|------|--------------------|---------------------------------------------------------------------------------------------------------------------------------|
|               |                          |                                       | Structural Engineering                            |                       |                                              |                                                   |   |   |          |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |
| III/II        | -                        | 13160305                              | Theory & Design of Plate and Shell                | Theory                | DSE                                          | Separate                                          | 3 | 1 | 0        | 4       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
|               | -                        |                                       | Choose one of the following                       |                       |                                              |                                                   |   |   |          |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |
| III/II        | -                        | 13160325                              | Pre-Fabricated Structures                         | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
| III/II        | -                        | 13160327                              | Design of Industrial Structures                   | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
| III/II        | -                        | 13160329                              | Maintenance & Rehabilitation of Structures        | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
|               |                          |                                       | Choose one of the following                       |                       |                                              |                                                   |   |   |          |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |
| III/II        | -                        | 13160331                              | Design of Bridges                                 | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
| III/II        | -                        | 13160333                              | Composite Structures                              | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
| III/II        | -                        | 13160335                              | Design of Tall Buildings                          | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
|               |                          |                                       | Remote Sensing & GIS                              |                       |                                              |                                                   |   |   |          |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |
| III/II        | -                        | 13160370                              | Digital Image Processing                          | Theory                | DSE                                          | Separate                                          | 3 | 1 | 0        | 4       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
|               |                          |                                       | Choose one of the following                       |                       |                                              |                                                   |   |   |          |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |
| III/II        | -                        | 13160371                              | Web and Mobile GIS                                | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
| III/II        | -                        |                                       | Remote Sensing in Agriculture                     | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
| III/II        | -                        | 13160373                              | Remote Sensing Geology                            | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
|               |                          |                                       | Choose one of the following                       |                       |                                              |                                                   |   |   |          |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |
| III/II        | -                        |                                       | Application of Global Navigation Satellite System | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
| III/II        | -                        | 13160375                              | Advanced Surveying and Cartography                | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
| III/II        | -                        | 13160376                              | Pattern Recognition and Machine Learning          | Theory                | DSE                                          | Separate                                          | 3 | 0 | 0        | 3       | 60  | 24   | 5                | 20                 | 5          | 10                      | 40  | 16   | -                          | -         | -   | -    | -          | -                                        | -                                    | -   | -    | 50                 | External+Internal                                                                                                               |
|               |                          |                                       | Total Credits for the Semester                    |                       |                                              |                                                   | 9 | 1 | 12       | 16      |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |
| IV/II         | -                        | 13160432                              | Dissertation Phase-II                             | Practical             | Core                                         | Separate                                          | 0 | 0 | 16 Weeks | 16      | -   | -    | -                | -                  | -          | -                       | -   | -    | 60                         | 60        | 120 | 48   | 20         | 20                                       | 40                                   | 80  | 32   | 100                | External+Internal                                                                                                               |
|               |                          |                                       | Total Credits for the Semester                    |                       |                                              |                                                   | 0 | 0 | 16 Weeks | 16      |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |
|               |                          |                                       | TOTAL CREDITS REQUIRED FOR DEGREE : 68            |                       |                                              |                                                   |   |   |          |         |     |      |                  |                    |            |                         |     |      |                            |           |     |      |            |                                          |                                      |     |      |                    |                                                                                                                                 |

|                                                |                         |
|------------------------------------------------|-------------------------|
| Is there provision for Internal Marks Revision | As Per University Norms |
| Number of chances for reappear                 | As Per University Norms |
| Promotion Criteria                             | As Per University Norms |

**Note: If student wants to pursue a specialization offered by the department then He/She will have to opt for it in First Semester itself and same will be notified to COE accordingly**





