

## Details of Minor Specialization Courses (Disciplinary)

**Construction Management:** Construction Management is a specialization required most at construction sites. A Civil Engineering graduate who aspires to make his career in construction industry should opt for this specialization. As the construction industry is modernizing day by day, new technologies and automation is need of the hour. This specialization will equip students with modern day construction practices.

| Sr. No. | For Construction Management |                                    | Semester | Contact Hours |   |   |       | Credits |
|---------|-----------------------------|------------------------------------|----------|---------------|---|---|-------|---------|
|         | Course code                 | Course Title                       |          | L             | T | P | Total |         |
| 1       | CE351                       | Sustainable Construction           | Third    | 3             | - | - | 3     | 3       |
| 2       | CE352                       | Construction Planning and Control  | Fourth   | 3             | - | - | 3     | 3       |
| 3       | CE353                       | Construction Safety and Health     | Fifth    | 3             | - | - | 3     | 3       |
| 4       | CE354                       | Advances In Construction Materials | Sixth    | 3             | - | - | 3     | 3       |
| 5       | CE355                       | Value Engineering                  | Seventh  | 3             | - | - | 3     | 3       |
| 6       | CE356                       | Construction Financial Management  | Seventh  | 3             | - | - | 3     | 3       |
| 7       | CE401                       | Project Oriented Practice          | Eight    | -             | - | - | 4     | 2       |
|         |                             |                                    | TOTAL    |               |   |   | 22    | 20      |

**Structural Engineering:** Students who aspire to make their careers in Structural Design should opt for this specialisation. This specialization will equip students with required skills to design structures other than general buildings. With more and more research in construction materials our structures are getting bigger and taller. These structures are subjected to various loads other than Dead Load and Live Load. This specialization will also be helpful for students who want pursue higher studies in the field of Structural Engineering.

| S.No. | Course Code | Course Title                              | Semester | Contact Hours |   |   |       | Credit |
|-------|-------------|---|----------|---------------|---|---|-------|--------|
|       |             |   |          | L             | T | P | Total |        |
| 1     | CE361       | Concrete Technology                       | Third    | 3             | - | - | 3     | 3      |
| 2     | CE402       | Concrete Technology Lab                   | Third    | -             | - | 2 | 2     | 1      |
| 3     | CE362       | Numerical Techniques in Civil Engineering | Fourth   | 3             | - | - | 3     | 3      |
| 4     | CE363       | Health Monitoring of Structures           | Fifth    | 3             | - | - | 3     | 3      |
| 5     | CE403       | Structural Health Monitoring Lab          | Fifth    |               |   |   |       | 1      |
| 6     | CE364       | Special Reinforced Concrete Structures    | Sixth    | 3             | - | - | 3     | 3      |
| 7     | CE365       | Structural Design and Detailing           | Seventh  | 3             | - | - | 3     | 3      |
| 8     | CE366       | Earthquake Engineering                    | Eighth   | 3             | - | - | 3     | 3      |
|       |             |   | Total    |               |   |   | 22    | 20     |

**Quantity Surveying:** Quantity Surveying is a specialization required most for project planning and execution. A Civil Engineering graduate who aspires to make his career in construction industry should opt for this specialization. Specialization in Quantity Surveying emphasizes on the Economic, Legal, Financial and Managerial techniques of the construction process for the student to obtain an in-depth knowledge in these sectors. This specialization will equip students with modern day project planning and management.

| Sr. No. | For Quantity Surveying |  | Semester | Contact Hours |   |   |       | Credits |
|---------|------------------------|--|----------|---------------|---|---|-------|---------|
|         | Course code            | Course Title   |          | L             | T | P | Total |         |
| 1       | CE371                  | Building Planning and Drawing                          | Third    | 2             | 1 | - | 3     | 3       |
| 2       | CE372                  | Estimation of Buildings and Roads                      | Fourth   | 3             | - | - | 3     | 3       |
| 3       | CE373                  | Quantity Surveying of Bridges and Hydraulic Structures | Fifth    | 3             | - | - | 3     | 3       |
| 4       | CE374                  | Construction Contracts and Laws                        | Sixth    | 3             | - | - | 3     | 3       |
| 5       | CE375                  | Quality Assurance & Quality Control                    | Seventh  | 3             | - | - | 3     | 3       |
| 6       | CE356                  | Construction Financial Management                      | Seventh  | 3             | - | - | 3     | 3       |
| 7       | CE401                  | Project Oriented Practice                              | Eight    | -             | - | - | 4     | 2       |
|         |                        |  | TOTAL    |               |   |   | 22    | 20      |