| | 2 year M. Tech. Course Curricula for Structural Engineering | | | | | | | | | |
|-------|---|--|----------------|----|---|---|---------|--|--|--|
| | M. Tech. I semester-(M1) | | | | | | | | | |
| S.No. | Subject Code | Subject | Core/Elect ive | L | Т | P | Credits | | | |
| 1 | CE501 | Advanced Structural Analysis | Core | 3 | 0 | 0 | 3 | | | |
| 2 | CE502 | Structural Dynamics | Core | 3 | 0 | 0 | 3 | | | |
| 3 | CE503 | Design of Reinforced Concrete Structures | Core | 3 | 0 | 0 | 3 | | | |
| 4 | CE504 | Finite Element Methods | Core | 3 | 0 | 0 | 3 | | | |
| 5 | CE7XX | Elective-I | Elective | 3 | 0 | 0 | 3 | | | |
| 6 | CE601 | Concrete Structures Laboratory | Core | 0 | 0 | 4 | 2 | | | |
| | | Total | | 15 | 0 | 4 | 17 | | | |

| List of Electives-I | | Core/Elective | L | T | P | Credits | |
|---------------------|------------|--------------------------------|----------|---|---|---------|---|
| 1 | 14M14MA213 | Advanced Numerical Techniques | Elective | 3 | 0 | 0 | 3 |
| 2 | CE701 | Stability of Structures | Elective | 3 | 0 | 0 | 3 |
| 3 | CE702 | Plastic Analysis of Structures | Elective | 3 | 0 | 0 | 3 |
| 4 | CE703 | Hydraulic Structures | Elective | 3 | 0 | 0 | 3 |
| 5 | CE704 | Geo-Environmental Engineering | Elective | 3 | 0 | 0 | 3 |

| | 2 year M.Tech. Course Curricula for Structural Engineering | | | | | | | | | |
|-------|--|--|---------------|----|---|---|---------|--|--|--|
| | M.Tech. II semester-(M2) | | | | | | | | | |
| S.No. | Subject Code | Subject | Core/Elective | L | T | P | Credits | | | |
| 1 | CE505 | Solid Mechanics in Structural Engineering | Core | 3 | 0 | 0 | 3 | | | |
| 2 | CE506 | Design of Steel Structures | Core | 3 | 0 | 0 | 3 | | | |
| 3 | CE507 | Earthquake Resistant Design of Structures | Core | 3 | 0 | 0 | 3 | | | |
| 4 | CE508 | Theory of Plates and Shells | Core | 3 | 0 | 0 | 3 | | | |
| 5 | CE7XX | Elective-2 | Elective | 3 | 0 | 0 | 3 | | | |
| 6 | CE602 | CAD Laboratory | Core | 0 | 0 | 4 | 2 | | | |
| | | Total | | 15 | 0 | 4 | 17 | | | |

| List of | f Electives-II | | Core/Elective | L | T | P | Credits |
|---------|----------------|-------------------------------------|---------------|---|---|---|---------|
| | | Modelling, Simulation and Computer | | 3 | 0 | 0 | 3 |
| 1 | CE705 | Applications | Elective | | | | |
| | CE706 | Engineering Design Optimization and | Elective | 3 | 0 | 0 | 3 |
| 2 | | Reliability | | | | | |
| | CE707 | Fracture Mechanics in Quasi-Brittle | Elective | 3 | 0 | 0 | 3 |
| 3 | | Materials | | | | | |
| 4 | CE708 | Design of Bridge Sub-structure | Elective | 3 | 0 | 0 | 3 |
| 5 | CE709 | Soil Structure Interaction | Elective | 3 | 0 | 0 | 3 |

| | 2 year M.Tech. Course Curricula for Structural Engineering | | | | | | | | |
|---------------------------|--|---------------------|---------------|---|---|----|---------|--|--|
| M.Tech. III semester-(M3) | | | | | | | | | |
| S.No. | Subject Code | Subject | Core/Elective | L | Т | P | Credits | | |
| 1 | CE7XX | Elective-3 | Elective | 3 | 0 | 0 | 3 | | |
| 2 | CE7XX | Elective-4 | Elective | 3 | 0 | 0 | 3 | | |
| 3 | CE603 | Seminar | Core | 0 | 0 | 0 | 2 | | |
| 4 | CE604 | Dissertation Part-I | Core | - | - | 24 | 12 | | |
| | | Total | | 6 | 0 | 24 | 20 | | |

| List | of Electives-III | | Core/Elective | L | T | P | Credits |
|------|-------------------|---|---------------|---|---|---|---------|
| 1 | CE710 | Design of Industrial Structures | Elective | 3 | 0 | 0 | 3 |
| 2 | CE711 | Recent Advances In Construction Materials | Elective | 3 | 0 | 0 | 3 |
| 3 | CE712 | Pre-Stressed Concrete Design | Elective | 3 | 0 | 0 | 3 |
| 4 | CE713 | Composite Materials and Structures | Elective | 3 | 0 | 0 | 3 |
| 5 | CE714 | Analysis and Design of Tall Buildings | Elective | 3 | 0 | 0 | 3 |
| 6 | CE715 | Structural Health Monitoring | Elective | 3 | 0 | 0 | 3 |
| List | t of Electives-IV | | Core/Elective | L | T | P | Credits |
| 1 | CE716 | Repair And Retrofitting of Structures | Elective | 3 | 0 | 0 | 3 |
| 2 | CE717 | Construction Methods And Equipments | Elective | 3 | 0 | 0 | 3 |
| 3 | CE718 | Structural Vibration Control | Elective | 3 | 0 | 0 | 3 |
| 4 | CE719 | Formwork for Concrete Structures | Elective | 3 | 0 | 0 | 3 |

| | 2 year M. Tech. Course Curricula for Structural Engineering | | | | | | | | |
|---------------------------|---|----------------------|---------------|---|---|---|---------|--|--|
| M. Tech. IV semester-(M4) | | | | | | | | | |
| S.No. | Subject Code | Subject | Core/Elective | L | T | P | Credits | | |
| 1 | CE7XX | Elective-5 | Elective | 3 | 0 | 0 | 3 | | |
| 2 | CE7XX | Elective-6 | Elective | 3 | 0 | 0 | 3 | | |
| 3 | CE605 | Project Seminar | Core | 0 | 0 | 0 | 2 | | |
| 4 | CE606 | Dissertation Part-II | Core | - | - | - | 14 | | |
| | | Total | | | | | 22 | | |

| List | t of Electives-V | | Core/Elective | L | T | P | Credits |
|------|----------------------|--------------------------------------|---------------|---|---|---|---------|
| 1 | CE720 | Advanced Steel Design | Elective | 3 | 0 | 0 | 3 |
| 2 | CE721 | Wind Engineering | Elective | 3 | 0 | 0 | 3 |
| 3 | CE722 | Blast Resistant Design of Structures | Elective | 3 | 0 | 0 | 3 |
| | CE723 | Computer Application in Structural | Elective | 3 | 0 | 0 | 3 |
| 4 | | Analysis & Design | | | | | |
| 5 | CE724 | Masonry Structures | Elective | 3 | 0 | 0 | 3 |
| List | List of Electives-VI | | Core/Elective | L | T | P | Credits |
| 1 | CE725 | Design of Substructures | Elective | 3 | 0 | 0 | 3 |
| 2 | CE726 | Bridge Engineering | Elective | 3 | 0 | 0 | 3 |
| 3 | CE727 | Nanotechnology and Concrete | Elective | 3 | 0 | 0 | 3 |
| 4 | CE728 | Design of Fiber Reinforced Composite | Elective | 3 | 0 | 0 | 3 |
| | | Structures | | | | | |