

**MSCE – Structural Engineering Sample Course Plan**

*This course plan serves as an example of the program. Program requirements and course offerings are subject to change.*

<p>Fall 2024</p> <ul style="list-style-type: none"> <li>• Required Course (4 units)</li> <li>• Required Course (2 units)</li> <li>• Elective (2 units)</li> </ul>	<p>Spring 2024</p> <ul style="list-style-type: none"> <li>• Required Course (2 units)</li> <li>• Required Course (4 units)</li> <li>• Elective (2 units)</li> </ul>
<p>Fall 2025</p> <ul style="list-style-type: none"> <li>• Elective (4 units)</li> <li>• Elective (4 units)</li> </ul>	<p>Spring 2025</p> <ul style="list-style-type: none"> <li>• Elective (4 units)</li> </ul>

**Required Courses (12 units)**

- CE 507: Mechanics of Solids (4 units)
- CE 531: Quantifying Uncertainty in Civil and Environmental Engineering (2 units)
- CE 532: Data Analytics in Engineering (2 units)
- CE 541: Dynamics of Structures (4 units)

**Electives (16 units)**

- CE 501: Architecture, Engineering and Construction Practices (4 units)
- CE 525: Engineering Mathematical Analysis (3 units)
- CE 526: Engineering Mathematical Methods (4 units)
- CE 528: Seismic Analysis and Design of Reinforced Concrete Bridges (3 units)
- CE 529: Finite Element Analysis (4 units)
- CE 533: Geotechnical Earthquake Engineering (4 units)
- CE 534: Retaining Structures & Slope Stability (4 units)
- CE 535: Earthquake Engineering: Strong Motion Studies (2 units)
- CE 537: Advanced Reinforced Concrete (4 units)
- CE 538: Prestressed Concrete (2 units)
- CE 539: Advanced Steel Structures (4 units)
- CE 542: Theory of Plates and Shells (2 units)
- CE 543: Structural Instability & Failure (4 units)
- CE 546: Structural Mechanics of Composite Materials (2 units)
- CE 540: Tall and Special Structures (2 units)
- CE 547: Earthquake Engineering - Response of Structural (4 units)
- CE 548: Timber and Masonry Design (4 units)
- CE 647: Multiscale Methods in Mechanics (3 units)
- CE 599: Structural Identification (4 units)
- CE 599: Case Studies for Probabilistic Modeling (2 units)
- CE 599: Soft Materials and 3D Printing (4 units)