

CE 5410: Dynamic Analysis of Structures

Course Description:

Single and multi-degree-of-freedom systems. Free and forced vibrations. Linear and nonlinear response. Modal analysis. Response spectra. Seismic analysis.

Course Topics

- Single-Degree-of-Freedom Systems
 - Free vibration
 - Harmonic Excitations
 - Impulsive Loading
 - General Dynamic Loading (e.g., earthquake excitation)
 - Nonlinear systems
- Distributed Mass Systems
- Multi-Degree-of-Freedom Systems
 - Free Vibration
 - Response of Linear Systems
 - Response of Nonlinear systems