

Course Name:

Dynamics of Structures

Course Number: 20-153	Credit: 3
Program: Graduate	Course Type: Technical Required
Prerequisite: -	Corequisite: -

Course Description (Objectives):

The objective of this course is to familiarize students with the concepts of dynamic equilibrium in structural members and buildings, and to provide the necessary fundamentals for analyzing the behavior of structures under dynamic loads such as impact and earthquakes. Students will also become acquainted with methods for analyzing and modeling the dynamic response of structures.

Course Content (outline):

- Chapter 1: Overview of Structural Dynamics.
- Chapter 2: Single Degree of Freedom Systems.
- Chapter 3: Generalized Single Degree of Freedom Systems.
- Chapter 4: Multi-Degree of Freedom Systems.

References:

- Dynamics of Structures, Theory and Application to Earthquake Engineering, Anil K. Chopra, Prentice Hall, 4th Edition, 2006
- Clough, R.W. and Penzien, J., "Dynamics of Structures", 3rd Edition, McGraw-Hill, New York, 2003.