



Module PMRF-ISSS061 II 2025

Basic Concepts in Structural Dynamics: A Focus on SDOF Systems (Part 2)

Name of the PMRF student

Sukanya Karmakar

Required background of the students taught

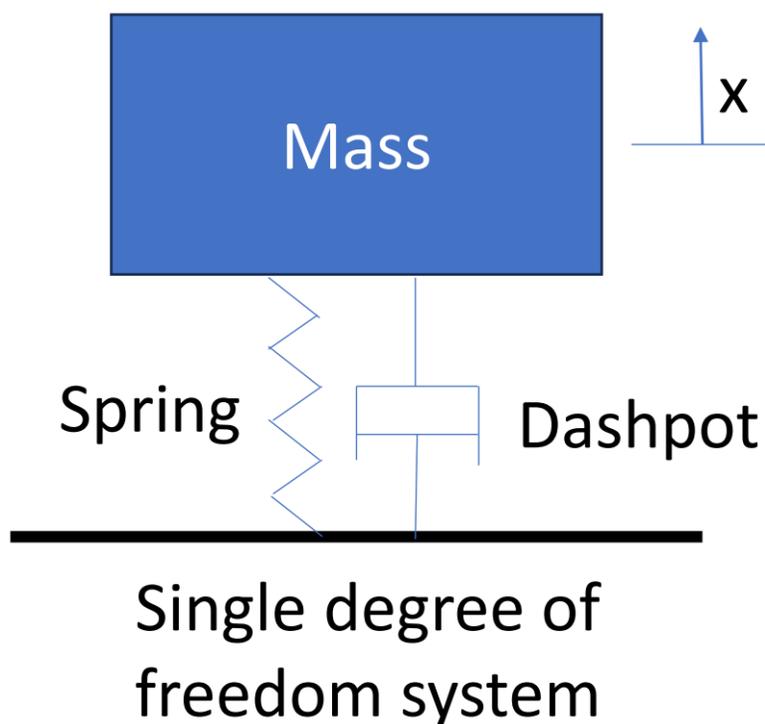
Civil Engineering
Mechanical Engineering
Aerospace Engineering

Details of the content of the module

1. Overview of numerical integration techniques for dynamic analysis
2. Implementing linear SDOF response in MATLAB using:
 - Method based on interpolation of excitation
 - Central difference method
 - Newmark-beta method
3. Implementing nonlinear linear SDOF response in MATLAB using Newmark-beta method

This short course builds upon the fundamental principles introduced in the first part of the course (**Basic Concepts in Structural Dynamics: A Focus on SDOF Systems (Part 1)**).

The course features structured and recorded video lectures where key concepts are clearly explained. By the end of the module, learners will be equipped to simulate the dynamic response of SDOF systems in MATLAB for both academic and practical applications.



Schedule of the module

Start Date: 4th July 2025

End Date: 4th July 2025 (Tentative)

Schedule: Recorded videos of 3 hours 30 minutes at 9 a.m.

Number of lectures: 1

Duration: Total ~3 hours 30 minutes

Meeting link : Will be shared later

[Link](#)

Contact email

ID: issforum@gmail.com

Registration link:

<https://docs.google.com/forms/d/e/1FAIpQLSdGcRu92P2qbpLQuEWoYiY0F3viEK>