MECH 5881 - Mechanical Vibrations

Fall 2026 Syllabus, Section 03, CRN 41372,

Credit hours: 3

Instructor

Alexander Pesch

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Public Instructor Information

Instructor Title: Assistant Professor
Instructor Professional Qualifications:

Dr. Eng., Cleveland State University, 2013

MSME, Cleveland State University, 2008

BSME, Ohio University, 2006

Instructor Office Location: Moser Hall 2520
Instructor Office Phone: (330) 941-1731

Course Description

5881. Mechanical Vibrations. Introduction to mechanical vibrations: single and multi-degree of freedom systems, free and forced vibrations, impedance and modal analysis including applications. Prereq.: MECH 3708. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Engineering Vibrations	Daniel Inman	

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Proposed Topic	Due/To Prepare for Class
8/24	1DoF Free Responses	
8/31	1DoF Free Responses	
9/7	1DoF Free Responses	Quiz 1
9/14	Intro to Simulations	
9/21	1DoF Driven Responses	
9/28	1DoF Driven Responses	Quiz 2
10/5	1DoF Driven Responses	
10/12	1DoF Driven Responses	Midterm Exam
10/19	1DoF Special Cases	
10/26	1DoF Special Cases	
11/2	MDoF Analysis	Quiz 3
11/9	MDoF Analysis	
11/16	MDoF Simulations	
11/23	MDoF Simulations	Quiz 3

11/30	Project 3 Presentations
12/7	Project 3 Presentations

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.