

# The University of Jordan

## School of Engineering



Department	Course Name	Course Number	Semester
Mechanical Engineering	Vibration and Noise Control	0944582	Fall 2023

### 2005 Course Catalog Description

Nature and propagation of sound, Measurement of sound, Sound Absorption, Room acoustics, Sound Isolation and Design of Enclosures, Sources of Vibrations in Machinery, Vibrations Measurements, Vibration Isolation, Control of Vibrations in Machines. Design of Vibration Absorbers.

### Instructors

Name	E-mail	Sec	Office Hours	Lecture Time
Ahmad Al-Qaisia	alqaisia@ju.edu.jo	1		8:30-9:30

### Text Books

	Text book 1	Text book 2
Title	Mechanical Vibrations	Handouts and Tables
Author(s)	Singiresu, S. Rao	
Publisher, Year, Edition	Addison-Wesley 5th Edition.	

### References

Books	Malcolm J. Crocker ( <i>Editor</i> ) (2007), Handbook of noise and vibration control, John Wiley& Sons.
Journals	Journal of Sound and Vibration
Internet links	

### Prerequisites

Prerequisites by topic	
Prerequisites by course	Mechanical Vibrations 0904411
Co-requisites by course	
Prerequisite for	

### Topics Covered

Week	Topics	Chapter in Text	Sections
1	Fundamentals of Acoustics, Nature of Sound and Propagation		
2	Noise and Sound		
2	Measurements of Sound and Sound Levels		
3	Acoustics of Rooms and Sound Enclosures		
3	Case Studies in Noise Control		
4	Sources of Vibrations in Machinery		
5	Vibration Control and Vibration Isolation		
6	Design of Vibration Absorbers		

### Mapping of Course Outcomes to ABET Student Outcomes

SOs	Course Outcomes
1	1. Understand the concept of sound pressure and sound power levels. 2. Design of vibration absorbers
2	3. Selection of acoustical materials based on their absorption and transmission coefficients 4. Use sound standards to design workshops and rooms based on the recommended sound level
4	5. Calculate the forced response of single multi degree of freedom systems

