Department: Mechanical Engineering   A.Y. 2023-24   Semester:II   Date:

Course Outline

Class: TY B Tech	Name of the Course: Mechatronics (Pr)	
Course Type: PCC	Course code: BME6417	
	Examination Structure	
Credits: 01	OR	Total
	25	25

Course Relevance: Mechatronics is an interdisciplinary branch of engineering that focuses on the integration of mechanical, electronic and electrical engineering systems, and also includes a combination of robotics, electronics, computerscience, telecommunications, systems, control,and product engineering.

Pre requisites:
a. Applied Mathematics
b. Metrology and Mechanical Measurement

Course Outcome and Mapping with POs and PSOs

Bloom's Level	Descriptor	Bloom's level multiplier (BLM)
1	Remember	0.5
2	Understand	0.6
3	Apply	0.7
4	Analyse	0.8
5	Evaluate	0.9
6	Create	1

CO	Statement	Learning Level	PO/ PSO Mapped	Tools for direct Assessment
1	Develop skills in using software tools and techniques for mechatronics applications.	0.8 (Analyze)	PO1,PO2,PO3, PO5,PO9,PO12	Oral
2	Demonstrate knowledge of interfacing any sensor to acquire the data.	0.8 (Analyze)	PO1,PO2,PO3, PO5,PO9,PO12	Oral

Rubrics for Experiments

	Excellent (2 marks)	Good (1 marks)	Poor (0 marks)
Experimentation: • Demonstrates a clear understanding of the experimental setup and its components. • Sets up the experiment accurately, following established protocols and safety guidelines. • Considers relevant variables and controls necessary for the experiment. • Software Utilization: Utilizes and Demonstrates proficiency in using software tools effectively to support the experimentation.			
Data Collection and Measurement: • Collects accurate and reliable data using appropriate measurement techniques and instruments. • Records data systematically, ensuring proper units and precision.			

	Pimpri Chinchwad Education Trust's **Pimpri Chinchwad College of Engineering** Sector No. 26, Pradhikaran, Nigdi, Pune – 411 044	

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• Considers sources of error and takes steps to minimize or account for them.			
Data Analysis and Interpretation: • Presents data in a clear and organized manner, utilizing tables, graphs, or charts. • Draws meaningful conclusions based on the analysis and interprets the results appropriately.			
Documentation, Reporting and Time Management: • Adherence to the allocated time frame • Ability to summarize and prioritize key points within the given time • Maintains a well-organized and comprehensive experimental log or notebook. • Documents all observations and relevant details during the experiment. • Prepares a clear and concise report summarizing the experiment, including objectives, results, and conclusions.			
Collaboration and Teamwork : • Demonstrates effective collaboration within a team, sharing responsibilities and contributing to group discussions. • Communicates and coordinates with team members to ensure smooth execution of the experiment. • Responding to the questions effectively			

Teaching Plan for Theory Sessions   **Marks distribution**

CO/PO	PO1	PO2	PO3	PO5	PO9	PO12	
1	2	2	1	3	3	3	14
2	2	2	1	3	3	3	14
	4	4	2	6	6	6	28

CO	Oral	
Out of	25	25
Converted to	25	25
CO1 and CO2	25	25

Course Faculty TY A	Course Faculty TY B	Course Faculty TY C
V.K. Aher	Dr. R. Bhosale	Dr. R. Bhosale / Dr. R.A.Gujar

Course Coordinator: Dr.R.A.Gujar