

"Where Mechanics, Electronics and Computing Converge"
DEPARTMENT OF MECHATRONICS ENGINEERING
A.Y. 2022-23 (SEM-I) • December 2022



Welcome and best wishes to all the friends of the Department who receive this Newsletter.

This Newsletter is an attempt towards achieving Motivation. This is one of the first university affiliated departments in the Savitribai Phule Pune University to offer a Bachelor of Engineering degree program in Mechatronics Engineering.

Vision, Mission & Program Specific Outcomes

Vision

To be a centre of excellence in mechatronics engineering producing competent professionals capable of developing innovative solutions for industry and society.

Mission

M1: Providing quality education in interdisciplinary domains through integration of hardware and software systems, while fostering professional ethics and lifelong learning for industry and societal needs.

M2: Equipping students with skills to design, develop, and implement efficient, reliable, and socially relevant engineering solutions through teamwork, innovation, and effective communication.

M3: Promoting innovation, practical learning, and strong industry interaction, enabling students to address real-world challenges and pursue research, entrepreneurship, and emerging technologies.

Program Specific Outcomes (PSO)

PSO1: To be able to apply fundamentals of mechanical, electrical, electronics and control engineering to design, analyze and maintain a mechatronics system.

PSO2: To be able to develop and implement solutions for industrial and societal problems applying multidisciplinary engineering principles.

Message from Head of the Department



Dr. Anjali J. Joshi
Head of Department,
Mechatronics Engineering

A mechatronic system is a multidisciplinary system embodying a synergistic combination of the disciplines of electrical/electronics, mechanical and computer science / information technology. In today's world mechatronic products and systems are all around us; such as the modern auto focus camera, washing machines with electronic controls, printing and photocopy machines etc. Modern automobiles have several mechatronic systems such as electric power assisted steering, engine management system, cruise control etc.

The newsletter is one of the ways in which we can disseminate information on the life of the Department. The past semester saw workshops, expert lectures and club activities that kept our students engaged and learning beyond the classroom. As you read through the pages you will realize that the Department had a particularly successful semester.

I would like to thank all my colleagues for their tireless efforts to help the department progress at a very steady pace.

– Dr. Anjali J. Joshi (HoD Mtrx.)

Editor's View

This Newsletter gives an opportunity to our students and staff to creatively solve real life problems with an interdisciplinary approach. It shows their insights and innovative ideas, and how these can be applied in almost any organization. The success of this newsletter depends on your response. Your feedback is highly appreciated.

– Asst. Prof. Sonali S. Patil (Faculty Editor)

Events & Activities

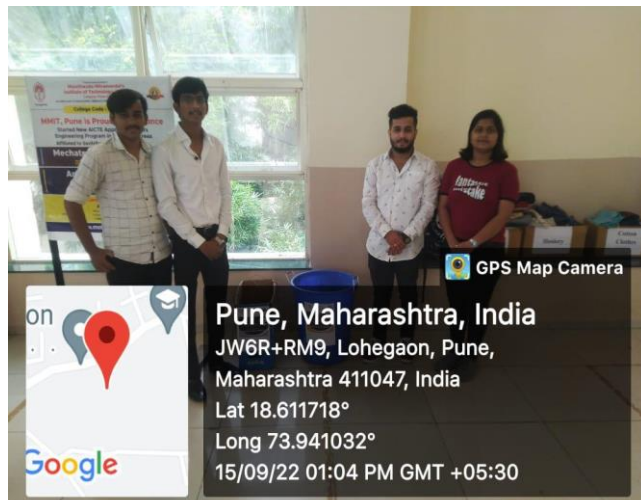
Two Days Workshop on Arduino Kit and Arduino IDE Software

The Mechatronics department organised a two day workshop on Arduino Kit and Arduino IDE software. The workshop aimed to provide an introduction to the ARDUINO environment. The workshop was conducted on 13th and 14th September 2022 by Mr Rigved Kelkar. The workshop gave insight into the programming of ARDUINO using Arduino IDE software. The participants came to know interfacing and control of different peripherals by using ARDUINO. Students learned a simple pathway to creating interactive objects that can take input from switches and sensors, and control physical outputs like lights, motors or actuators. 40 participants benefited from this workshop.



National Engineer's Day – Collection of E-Waste

MXESA marked National Engineer's Day on 15th September 2022 with an e-waste collection drive, encouraging students and staff to hand over unused electronic items for responsible disposal and recycling.



E-waste collection drive – National Engineer's Day, 15/09/2022

Value Added Course: MATLAB Programming for Numerical Computation

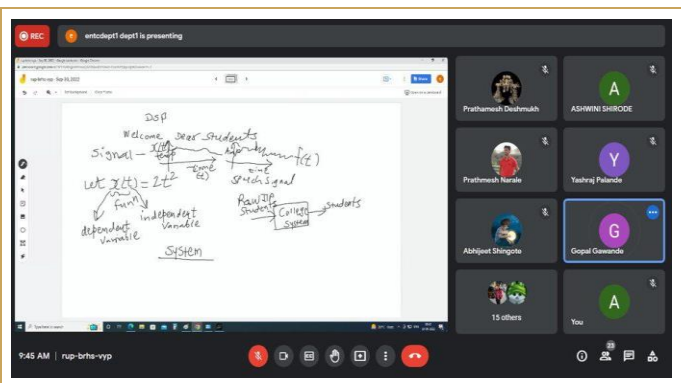
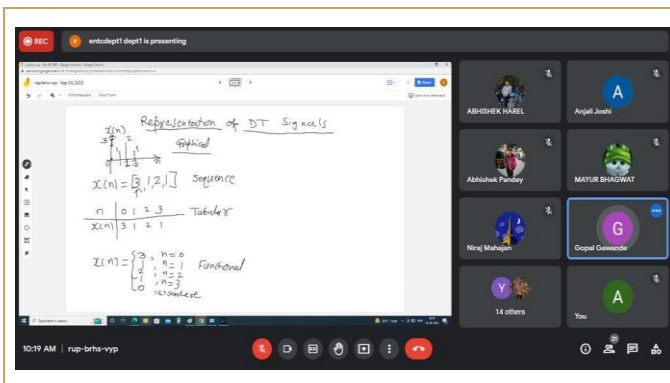
The one day workshop was organized by the Mechatronics Engineering Department on 12th October 2022. The resource person was Mr Rigved Kelkar. The objective of the workshop was to learn appropriate techniques for programming and simulation with MATLAB. The 35 participants learned the scope of MATLAB as a simulation tool for real life applications.



One day workshop on Hands-on for MATLAB Software

Industry Expert Talk: Concept of Digital Signal Processing

An expert lecture on the Concept of Digital Signal Processing was organized on 22nd October 2022 by Dr. G. S. Gawande. The objective of the lecture was to provide a valuable platform to understand the basic concepts and techniques for processing signals, to describe signals mathematically and to understand how to perform mathematical operations on signals. It also gave knowledge of digital filters. Mechatronics engineering is a multidisciplinary branch of engineering and digital signal processing is one of its important concepts. A total of 37 students benefited from the lecture.



Images of Expert Lecture

Faculty Achievements

Syllabus framing and implementation. Mechatronics is the new discipline introduced in Savitribai Phule Pune University in Academic Year 2020-21. The syllabus for Third Year was framed with the help of Board of Studies members, academicians etc. Faculty from our department contributed excellently in the same.



Student Achievements

Our students actively participated in state- and national-level competitions throughout the semester, showcasing their talent and bringing recognition to the department.



Academic Toppers – Result for Academic Year 2021-22

The second year of the curriculum ran successfully and the following students achieved top ranks in academics.

Rank	Name of the Student	SGPA
1	Sharayu Malekar	8.39
2	Vrushabh Jain	8.30
3	Omkar Lawand	8.05
4	Niraj Mahajan	8.02
5	Abhijeet Shingote	7.93

“It always seems impossible, until it’s done.” – Nelson Mandela

Editorial Board & About Us

Editorial Board

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HEAD OF DEPARTMENT

Dr. Anjali J. Joshi

About the Institute

Marathwada Mitra Mandal's Institute of Technology, Lohgaon Pune was established in 2008 and conducts the following courses leading to a Bachelor's Degree in Engineering:

- Computer Engineering
- Mechatronics Engineering
- Mechanical Engineering
- Civil Engineering
- Artificial Intelligence & Data Science

All these courses are approved by All India Council for Technical Education (AICTE), New Delhi, sanctioned by Govt. of Maharashtra and affiliated to Savitribai Phule Pune University. The Marathwada Mitra Mandal Society, Pune was established in 1963.

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