

### **Mechatronics Workshops**

## **Mechatronics Workshops**

NTHRYS BIOTECH LABS provides a diverse array of workshops in the realm of Mechatronics. Explore our comprehensive offerings below

Mechatronics Workshops Application Process Back to All Workshops

## Mechatronics Awaits: Navigate Through Our Workshop Offerings!

- 1. Workshop in Introduction to MechatronicsPDF
- 2. Workshop in Advanced Techniques in MechatronicsPDF
- 3. Workshop in Mechatronics in Biomedical ResearchPDF
- 4. Workshop in Innovations in MechatronicsPDF
- 5. Workshop in Ethical and Regulatory Perspectives in MechatronicsPDF

### **1.** Workshop in Introduction to Mechatronics

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Date: Pre Selected Date

Fee: Rs 6000/-

Duration: One Day

Mode: Offline and Virtual

Location for Offline: NBL Cherlapalli IDA Branch

#### Facilitator(s): NTHRYS TEAM

#### 8:00 AM - 8:30 AM: Registration and Welcome Coffee

Participants arrive, register, and network over coffee.

#### 8:30 AM - 8:45 AM: Opening Remarks

Welcome by the host. Brief overview of today's focus.

#### 8:45 AM - 10:15 AM: Session 1: Basics of Mechatronics

Overview of mechatronics principles and applications. Hands-on session on integrating mechanical, electrical, and computer systems. Introduction to the importance of mechatronics in modern engineering.

#### 10:15 AM - 10:30 AM: Coffee / Tea / Snacks Break

Networking and refreshments.

#### 10:30 AM - 12:00 PM: Session 2: Sensors and Actuators

Interactive session on sensors and actuators in mechatronics. Workshop on using various types of sensors and actuators. Practical demonstration of sensor integration in mechatronic systems.

#### 12:00 PM - 1:00 PM: Lunch Break

Catered lunch and networking opportunity.

#### 1:00 PM - 2:30 PM: Session 3: Microcontrollers and Programming

Exploring techniques for programming microcontrollers in mechatronics. Hands-on training on using microcontrollers like Arduino and Raspberry Pi. Case studies on the application of microcontrollers in mechatronics projects.

#### 2:30 PM - 2:45 PM: Short Break

Time for a stretch and informal discussions.

#### 2:45 PM - 4:15 PM: Session 4: System Integration and Testing

Workshop on integrating and testing mechatronic systems. Practical techniques for system integration and troubleshooting. Case studies on the role of system integration in successful mechatronics projects.

#### 4:15 PM - 4:30 PM: Coffee / Tea / Snacks Break

Last networking opportunity with snacks.

## 4:30 PM - 5:30 PM: Closing Session: Implementing Changes and Technology Adoption

Group discussions on implementing new techniques learned today. Dialogue on overcoming challenges in adopting new technologies in similar sectors. Feedback session and closing remarks. Certificate Issue

#### 5:30 PM: Workshop Concludes

### 2. Workshop in Advanced Techniques in Mechatronics

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Date: Pre Selected Date

Fee: Rs 6000/-

**Duration:** One Day

Mode: Offline and Virtual

Location for Offline: NBL Cherlapalli IDA Branch

Facilitator(s): NTHRYS TEAM

#### 8:00 AM - 8:30 AM: Registration and Welcome Coffee

Participants arrive, register, and network over coffee.

#### 8:30 AM - 8:45 AM: Opening Remarks

Welcome by the host. Brief overview of today's focus.

#### 8:45 AM - 10:15 AM: Session 1: Advanced Control Systems

Introduction to advanced control techniques in mechatronics. Hands-on session on PID controllers, fuzzy logic, and neural networks. Practical demonstration of advanced control systems in mechatronics.

#### 10:15 AM - 10:30 AM: Coffee / Tea / Snacks Break

Networking and refreshments.

#### 10:30 AM - 12:00 PM: Session 2: Robotics and Automation

Exploring robotics and automation in mechatronics. Workshop on designing and programming robotic systems. Case studies on the applications of robotics in industrial automation.

#### 12:00 PM - 1:00 PM: Lunch Break

Catered lunch and networking opportunity.

#### 1:00 PM - 2:30 PM: Session 3: Embedded Systems Design

Hands-on session on designing embedded systems for mechatronics. Exploring techniques for developing custom embedded solutions. Practical applications of embedded systems in mechatronics.

#### 2:30 PM - 2:45 PM: Short Break

Time for a stretch and informal discussions.

#### 2:45 PM - 4:15 PM: Session 4: Machine Vision and AI

Workshop on integrating machine vision and AI in mechatronics. Practical techniques for using image processing and machine learning. Case studies on the role of machine vision and AI in enhancing mechatronic systems.

#### 4:15 PM - 4:30 PM: Coffee / Tea / Snacks Break

Last networking opportunity with snacks.

#### 4:30 PM - 5:30 PM: Closing Session: Implementing Changes and Technology Adoption

Group discussions on implementing new techniques learned today. Dialogue on overcoming challenges in adopting new technologies in similar sectors. Feedback session and closing remarks. Certificate Issue

#### 5:30 PM: Workshop Concludes

### 3. Workshop in Mechatronics in Biomedical Research

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Date: Pre Selected Date

Fee: Rs 6000/-

Duration: One Day

Mode: Offline and Virtual

Location for Offline: NBL Cherlapalli IDA Branch

Facilitator(s): NTHRYS TEAM

#### 8:00 AM - 8:30 AM: Registration and Welcome Coffee

Participants arrive, register, and network over coffee.

#### 8:30 AM - 8:45 AM: Opening Remarks

Welcome by the host. Brief overview of today's focus.

#### 8:45 AM - 10:15 AM: Session 1: Role of Mechatronics in Biomedical Research

Overview of the importance of mechatronics in biomedical research. Hands-on session on developing biomedical devices using mechatronics. Case studies on the impact of mechatronics in biomedical research.

#### 10:15 AM - 10:30 AM: Coffee / Tea / Snacks Break

Networking and refreshments.

#### 10:30 AM - 12:00 PM: Session 2: Mechatronics in Medical Robotics

Exploring the role of mechatronics in medical robotics. Workshop on designing and programming medical robots. Case studies on the applications of mechatronics in surgery and rehabilitation.

#### 12:00 PM - 1:00 PM: Lunch Break

Catered lunch and networking opportunity.

#### 1:00 PM - 2:30 PM: Session 3: Mechatronics in Prosthetics

Hands-on session on the use of mechatronics in developing prosthetics. Exploring techniques for designing and testing prosthetic devices. Practical applications of mechatronics in improving prosthetic functionality.

#### 2:30 PM - 2:45 PM: Short Break

Time for a stretch and informal discussions.

## 2:45 PM - 4:15 PM: Session 4: Clinical Applications of Mechatronics

Workshop on translating mechatronics research into clinical practice. Practical techniques for using mechatronic devices in clinical settings. Case studies on the impact of mechatronics on patient care and treatment.

#### 4:15 PM - 4:30 PM: Coffee / Tea / Snacks Break

Last networking opportunity with snacks.

#### 4:30 PM - 5:30 PM: Closing Session: Implementing Changes and Technology Adoption

Group discussions on implementing new techniques learned today. Dialogue on overcoming challenges in adopting new technologies in similar sectors. Feedback session and closing remarks. Certificate Issue

#### 5:30 PM: Workshop Concludes

### 4. Workshop in Innovations in Mechatronics

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Date: Pre Selected Date

Fee: Rs 6000/-

Duration: One Day

Mode: Offline and Virtual

Location for Offline: NBL Cherlapalli IDA Branch

Facilitator(s): NTHRYS TEAM

#### 8:00 AM - 8:30 AM: Registration and Welcome Coffee

Participants arrive, register, and network over coffee.

#### 8:30 AM - 8:45 AM: Opening Remarks

Welcome by the host. Brief overview of today's focus.

# 8:45 AM - 10:15 AM: Session 1: Emerging Technologies in Mechatronics

Introduction to emerging technologies in mechatronics. Hands-on session on using advanced tools and techniques in mechatronics research. Case studies on innovative applications of new technologies in mechatronics.

#### 10:15 AM - 10:30 AM: Coffee / Tea / Snacks Break

Networking and refreshments.

# 10:30 AM - 12:00 PM: Session 2: AI and Machine Learning Integration

Exploring the integration of AI and machine learning in mechatronics. Workshop on developing intelligent mechatronic systems. Case studies on the applications of AI in enhancing mechatronics capabilities.

#### 12:00 PM - 1:00 PM: Lunch Break

Catered lunch and networking opportunity.

#### **1:00 PM - 2:30 PM: Session 3: Mechatronics in Internet of Things** (IoT)

Hands-on session on integrating mechatronics with IoT devices. Exploring techniques for real-time data analysis and decision making. Practical applications of mechatronics in IoT.

#### 2:30 PM - 2:45 PM: Short Break

Time for a stretch and informal discussions.

#### 2:45 PM - 4:15 PM: Session 4: Future Directions in Mechatronics

Discussion on emerging trends and future directions in mechatronics. Workshop on integrating new technologies in mechatronics research. Case studies on the potential impact of future innovations in mechatronics.

#### 4:15 PM - 4:30 PM: Coffee / Tea / Snacks Break

Last networking opportunity with snacks.

# 4:30 PM - 5:30 PM: Closing Session: Implementing Changes and Technology Adoption

Group discussions on implementing new techniques learned today. Dialogue on overcoming challenges in adopting new technologies in similar sectors. Feedback session and closing remarks. Certificate Issue

#### 5:30 PM: Workshop Concludes

# **5.** Workshop in Ethical and Regulatory Perspectives in Mechatronics

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Date: Pre Selected Date

Fee: Rs 6000/-

Duration: One Day

Mode: Offline and Virtual

Location for Offline: NBL Cherlapalli IDA Branch

Facilitator(s): NTHRYS TEAM

#### 8:00 AM - 8:30 AM: Registration and Welcome Coffee

Participants arrive, register, and network over coffee.

#### 8:30 AM - 8:45 AM: Opening Remarks

Welcome by the host. Brief overview of today's focus.

## 8:45 AM - 10:15 AM: Session 1: Ethical Considerations in Mechatronics Research

Overview of ethical issues in mechatronics research. Case studies on ethical dilemmas in studying mechatronic systems. Workshop on addressing ethical considerations in mechatronics research.

#### 10:15 AM - 10:30 AM: Coffee / Tea / Snacks Break

Networking and refreshments.

## **10:30 AM - 12:00 PM: Session 2: Regulatory Frameworks for Mechatronics**

Exploring regulatory guidelines and requirements for mechatronics research. Case studies on navigating regulatory challenges. Workshop on understanding international regulatory frameworks.

#### 12:00 PM - 1:00 PM: Lunch Break

Catered lunch and networking opportunity.

#### 1:00 PM - 2:30 PM: Session 3: Public Perception and Communication

Workshop on improving public understanding of mechatronics research. Techniques for effective science communication. Case studies on public engagement and education initiatives.

#### 2:30 PM - 2:45 PM: Short Break

Time for a stretch and informal discussions.

#### 2:45 PM - 4:15 PM: Session 4: Policy and Planning for

#### **Mechatronics**

Discussion on policy and planning for sustainable mechatronics research. Case studies on effective policies and planning strategies. Workshop on integrating ethical and social considerations in mechatronics research.

#### 4:15 PM - 4:30 PM: Coffee / Tea / Snacks Break

Last networking opportunity with snacks.

### 4:30 PM - 5:30 PM: Closing Session: Implementing Changes and Technology Adoption

Group discussions on implementing new techniques learned today. Dialogue on overcoming challenges in adopting new technologies in similar sectors. Feedback session and closing remarks. Certificate Issue

#### 5:30 PM: Workshop Concludes

Note: NTHRYS Management reserves the right to modify the workshop module at any time without prior notice. Registered or enrolled candidates will receive the module that is current on the day of enrollment.

## **NTHRYS Workshops Department**

## M: +91-7993084748

### Email: workshops ( a t ) nthrys [ d0t ] com

### **Mechatronics Workshops Application Process**

- 1. Select a workshop from the list.
- 2. Contact via whatsapp on the number present above to request fee details and dates suitable for joining. Alternatively, you can send an email to workshops (a t) nthrys [d 0 t] com.
- 3. Our Workshop department will contact you promptly to provide further assistance.