

PROFESSIONAL ELECTIVE COURSES: MECHATRONICS VERTICALS

| VERTICAL1 | VERTICAL2 | VERTICAL3 | VERTICAL4 | VERTICAL5 | VERTICAL6 | VERTICAL7 | VERTICAL8 |
|---|---------------------------------------|--|--|--|--------------------------------------|---|---|
| APPLIED ROBOTICS | DESIGN AND MANUFACTURING | SMART MOBILITY SYSTEMS | INTELLIGENT SYSTEMS | AUTOMATION | AVIONICS AND DRONE TECHNOLOGY | LOGISTICS AND SUPPLY CHAIN MANAGEMENT | DIVERSIFIED GROUP 1 |
| Robots and Systems in Smart Manufacturing | Robot and Machine Elements Design | Automobile Engineering | Applied Signal Processing | Object Oriented Programming in C++ | Avionics | Automation in Manufacturing | Linear Integrated Circuits |
| Drone Technologies | Design for X | Electric and Hybrid Vehicles | Applied Image Processing | Power Electronics | Control Engineering | Warehousing Automation | Single Board Computers |
| Micro Robotics | CNC Machine Tools and Programming | Automotive Mechatronics | Machine Learning for Intelligent Systems | Computer Architecture and Organisation | Guidance and Control | Material Handling Equipment, Repair and Maintenance | Reliability and Maintenance Engineering |
| Agricultural Robotics and Automation | Computer Integrated Manufacturing | Automotive System Modelling and Simulation | Condition Monitoring and Fault Diagnostics | Virtual Instrumentation | Navigation and Communication System | Robotics | Integrated Product Development |
| Collaborative Robotics | Advanced Manufacturing Systems | Vehicle Dynamics and Controls | Systems Modelling and Simulation Methods | Industrial Network Protocols | Design of UAV systems | Container Logistics | Medical Mechatronics |
| Robot Operating Systems | Additive Manufacturing | Aircraft Mechatronics | Optimization Techniques | Motion Control System | Aerodynamics of Drones | Logistics in Manufacturing, Supply Chain and Distribution | Micro Electro Mechanical Systems |
| Medical Robotics | Electronics Manufacturing Technology | Smart mobility and Intelligent Vehicles | Immersive Technologies and Haptic | Total Integrated Automation | *** | Data Science | Process Planning and Cost Estimation |
| Humanoid Robotics | Computer Aided Inspection and Testing | Advanced Driver Assistance Systems | Computer Vision and Deep Learning | Digital Twin and Industry 5.0 | *** | *** | VLSI and FPGA |