



The Electronic Instrumentation and Control (EIC) track, established in 2003 within the Department of Electrical and Computer Engineering, is one of four specialization options under Industrial Automation. It integrates system engineering, electronics, computing, and artificial intelligence to develop smart and adaptive control solutions.

Why Choose EIC?

- Develop cutting-edge skills in automation, control, and intelligent systems.
- Join a growing field powering the 4th and 5th Industrial Revolutions.
- Learn from high-level faculty and gain hands-on lab experience.
- Tackle real-world problems using smart technologies and industrial systems.

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Career Pathways

- Defense and Aerospace
- Oil and Gas
- Chemical and Petroleum Industries
- Food Processing
- Power Generation & Distribution
- Automated Manufacturing
- Electrical Control and Drives
- Automotive Systems
- Intelligent Sensors and Instrumentation
- Maintenance & Troubleshooting
- Industrial Communication Networks
- SCADA and Monitoring Systems
- Electrical Consumer Goods

EIC Graduates are everywhere:

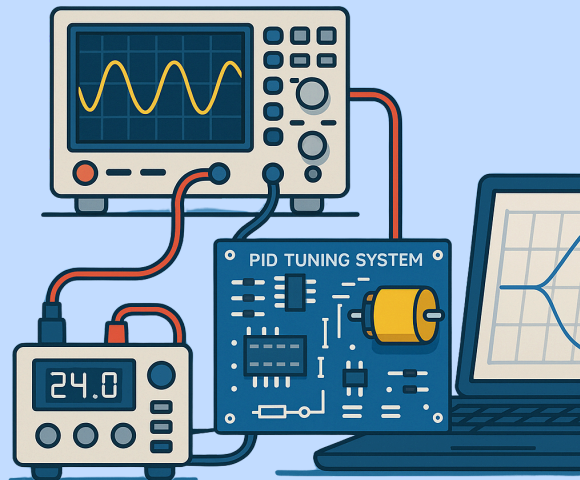
- Control Systems: From modeling to operation.
- Instrumentation: From sensors to smart monitoring.
- Power Electronics & Drives: From theory to motor control.

What You'll Learn?

- Control Systems: From modeling to operation.
- Instrumentation: From sensors to smart monitoring.
- Power Electronics & Drives: From theory to motor control.

Program Features

- Hands-on labs in Control, Automation, and AI Systems
- Industry-linked Final Year Projects
- Internship opportunities in Oman and abroad
- Electives in Smart Systems, IoT, and Robotics



EIC FOCUSES

The EIC specialization equips students with advanced skills in three key areas:

Control Systems

Students gain hands-on and theoretical expertise to design complete control systems—from plant modeling to controllers implementation. Courses cover analog, digital (microcontroller-based), and PLC/SCADA systems.

Instrumentation

Through specialized courses, students learn to select and calibrate sensors, apply signal conditioning, and develop computer-based monitoring and data acquisition systems.

Power Electronics & Drives

With the growing importance of power electronics in industry, students are trained in power conversion, motor drives, and practical applications through focused coursework.

THE PROGRAM IS SUPPORTED BY STRONG FOUNDATIONS IN PHYSICS, MATHEMATICS, PROBABILITY, CIRCUIT ANALYSIS, DIGITAL SYSTEMS, ELECTROMAGNETICS, AND COMMUNICATIONS.

