

NITEC IN MECHANICAL TECHNOLOGY

Electives (Course Specific)

Metrology

On completion of the module, students should be able to inspect, verify and measure engineering components according to technical drawing using of appropriate tools.

Mechanical Fabrication

On completion of the module, students should be able to fabricate and fit engineering components by bench fitting, sawing drilling, reaming and tapping operations according to the specifications in a working drawing.

Engineering Design

On completion of the module, students should be able to design mechanical components and create assembly drawings according to given specifications.

Turning

On completion of the module, students should be able to interpret engineering blueprint drawings, turn components safely using centre lathe to achieve a linear dimensional accuracy up to class IT11, an angular dimensional accuracy of $\pm 30'$ and surface roughness between 1.6 to 3.2 microns.

Bearing Technology

On completion of the module, students should be able to perform mounting and dismounting of anti-friction bearing with appropriate techniques and tools.

Electives (Inter-disciplinary)

Advanced PLC Applications

On completion of the module, students should be able to apply PLC instructions in the design of an industrial automation project and analogue-to-digital processing using Windows-based PLC programming software.

Microcontroller Applications

On completion of the module, students should be able to design and write programs for simple microcontroller projects.

Plain Milling

On completion of the module, students should be able to interpret technical drawings, mill plain components safely, using a vertical milling machine and supporting tools, to achieve a linear dimensional accuracy of IT10, an angular dimensional accuracy of $\pm 30'$ and a surface roughness between 1.6 to 3.2 microns.

Product Prototyping

On completion of the module, students should be able to create simple design of a product using 3D CAD software and produce a 3D model of it using basic prototyping devices.