

HIGHER NITEC IN PRECISION ENGINEERING

Core Modules

Advanced Materials and Metrology

On completion of the module, students should be able to describe the properties and applications of engineering plastics, metals and non-metals, alloys, and exotic materials, and applications of various heat treatment and surface treatment processes. They should also be able to interpret geometrical dimensioning & tolerances, perform measurement of parts with geometrical form and feature using gauges and complex measuring instruments including CMM, and generate quality control reports.

Advanced Machining and Tool Management

On completion of the module, students should be able to interpret blueprint drawings, create CNC part programs using CAM system, perform tooling setup, perform process planning, optimise CNC machining processes and machining parameters involving tool management, produce precise parts to specifications using CNC machines, and troubleshoot machining faults. They should also be able to select appropriate cutting tools for machining different materials, and perform inspection on machined parts using appropriate measuring tools.

Industry Attachment

On completion of the module, students should be able to acquire and apply a cluster of key technical, social and methodological competencies in their occupation.