

EN6990

Engineering Practice



Course Aim This course aims to provide students with a range of practical skills and an understanding of engineering principles required to machine or fabricate engineering components. Exposure to these workshop skills will give the student an understanding and an underpinning knowledge on which to base future engineering design considerations or decisions.

Short Title
Faculty EDICT
Polytechnic Level
Credits 15
Pre-requisites None
Co-requisites None
Anti-requisites None

Version 6
Effective From September 1, 2018
Indicative NQF Level 6
Student Contact hrs 90
Self-directed hrs 60
Other directed hrs 0
Total learning hrs 150

Learning Outcomes On successful completion of this course, students will be able to:

- 1 Demonstrate detailed knowledge and understanding of workshop safety including the identification and management of workshop hazards.
- 2 Produce simple engineering reports in a well-structure manner.
- 3 Interpret basic engineering drawings and use appropriate measuring equipment to manufacture components to a specified tolerance.
- 4 Demonstrate detailed knowledge and understanding of manufacturing processes, materials and terminology.
- 5 Manufacture basic engineering components using:
 - Hand tools
 - Hand Power tools
 - Power machines (radial drills bench presses etc...)
 - Lathes
 - Milling machines
 - Engravers
 - CNC machines
 - MMAW (Manual metal arc welding)
 - GMAW (Gas metal arc welding)
 - GTAW (Gas Tungsten arc welding)
 - Hard soldering/brazing/soft soldering

NQF Sub-strand

Practical
 Application of knowledge
 Practical
 Application of knowledge
 Generic, Problem Solving and Analytical Skills
 Practical
 Application of knowledge
 Practical
 Application of knowledge