

MODULE DESCRIPTOR

Module Title

Professional Skills

Reference	EN1600	Version	7
Created	August 2021	SCQF Level	SCQF 7
Approved	March 2004	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

Aims of Module

To develop and apply skills in engineering workshop practice, engineering applications, communication, academic writing and professional development.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Demonstrate competence in the use of workshop and laboratory skills to complete an engineering build project.
- 2 Demonstrate an understanding of the fundamentals of engineering drawing practice.
- 3 Apply appropriate skills for preparation for and delivery of effective oral and written communication.

Indicative Module Content

Engineering application and workshop skills: Sheet metal manufacture; fastening techniques; hand and machine tools. Soldering; printed circuit boards; component assembly; inter-wiring; mains wiring (mechanical, electronic and electrical). Use of workshop instrumentation; metrology; sources of error. Project: Understanding the design, manufacture, and assembly and testing of an electro-mechanical product. Communications skills: Engineering drawing - understanding basic principles: projection systems (orthographic, isometric); sectioning and assembly. Principles and practice of maintaining an engineering logbook. Report writing and delivering a presentation.

Module Delivery

Report writing and presentation will be delivered through a mixture of lectures, tutorials and directed study. Engineering drawing will be delivered by a series of in-class guided lessons leading to a portfolio of completed drawings. The subject of biomedical engineering will be introduced with a short activity to allow students experience of another discipline in engineering. The remainder of the module will be delivered in the flexible learning workshops by Engineering Applications supervisors. The students will be given set objectives and will, be expected to follow prescribed procedures. The work will include students tackling an individual project, in which they will design, manufacture and assemble an electro-mechanical product.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	60	N/A
Non-Contact Hours	90	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	40%	Outcomes Assessed:	1
Description:	Engineering design and build project with associated logbook.				

Component 2

Type:	Coursework	Weighting:	30%	Outcomes Assessed:	2
Description:	Portfolio of engineering drawings.				

Component 3

Type:	Coursework	Weighting:	30%	Outcomes Assessed:	3
Description:	Report and presentation.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

To pass the module the student must achieve a minimum of a grade D. Non-submission of any component will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
A	Two A's and one B in any component.
B	One A one C and one D in any component OR Two B's and one C in any component.
C	One B and two D's in any component OR Two C's and one D in any component.
D	One C and two D's in any component OR D's in all components.
E	E in one or more components.
F	F in one or more components.
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 British Standard BS 8888:2017 - Technical product documentation and specification.
- 2 LOVEDAY, G.C., 1995. Electronic Testing and Fault Diagnosis. 2nd ed. Harlow: Longman.
- 3 Manuals and other technical literature will be made available on loan as appropriate.