

Module Title:	Technical Graphics 1	
Language of Instruction:	English	
Credits:	5	
NFQ Level:	6	
Module Delivered In	No Programmes	
Teaching & Learning Strategies:	This module will be delivered via tutorials and practical classes. The practical work will comprise weekly sessions of hand drafting, CAD and Parametric modelling. Student presentations and group projects will also be used to promote learning	
Module Aim:	To provide the student with the skills to produce high quality hand-drafted working drawings and a basic knowledge of computer aided design	
Learning Outcomes		
On successful completion of this module the learner should be able to:		
LO1	Produce a portfolio of assembly drawings to ISO standards in First and Third angle projection using a drawing board;	
LO2	Produce a portfolio of Pictorial drawings of engineering components using a drawing board;	
LO3	Produce, edit and print a variety of engineering drawings using a CAD system;	
LO4	Identify and draw standard circuit diagrams for listed mechanical, electrical, electronic, pneumatic and hydraulic components;	
LO5	Interpret, from workings drawings, ISO tolerances and Machining & Finishing symbols; identify and draw various types of Cam.	
Pre-requisite learning		
Module Recommendations		
This is prior learning (or a practical skill) that is recommended before enrolment in this module.		
6419	GRAP H1601	Technical Graphics 1
Incompatible Modules		
These are modules which have learning outcomes that are too similar to the learning outcomes of this module.		
No incompatible modules listed		
Co-requisite Modules		
No Co-requisite modules listed		
Requirements		
This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.		
No requirements listed		

Module Content & Assessment

Indicative Content

Technical Drawing

o Use of letters, figures and lines in accordance with ISO standards. o Construction methods for triangles, polygons, circles, arcs and tangents. o Third and first angle projection of parts, detailed and assembly drawings. o Pictorial representation of parts; isometric and oblique. o Specification of manufacturing variations and surface finish. o Free hand sketching.

Pneumatic and Hydraulic Systems

o Symbols for compressors, filters, actuators, non-return valves, gate valves, reservoirs, gauges, pressure reducing valves and other devices. o Conventions for pneumatic flow diagrams. Standard diagrams for pressure measurement, flow measurement and pneumatic control systems.

Computer Aided Drafting

o Introduction to basic CAD concepts. o Basic editing and drawing commands. o Enhancing CAD drawings with text, symbols and blocks. o Introduction to PDM. o Introduction to design intent. o File management. o Adding and editing dimensions with different dimensioning styles.

Assessment Breakdown	%
Practical	100.00%

No Continuous Assessment

No Project

Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Individual portfolios will be assembled throughout the academic year and assessed.	1,2,3,4,5	80.00	Sem 1 End
Practical/Skills Evaluation	Student presentations, group projects and online assessment.	1,2,3,4,5	20.00	n/a

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Laboratory	Every Week	3.00
Estimated Learner Hours	Every Week	1.50
Total Hours		4.50

