

Module Title:	Computer Aided Drafting
Language of Instruction:	English
Credits:	5
NFQ Level:	6
Module Delivered In	4 programme(s)
Teaching & Learning Strategies:	This module will be delivered via tutorials and practical classes. The practical work will comprise weekly sessions of CAD and Parametric modelling. Student presentations and group projects will also be used to promote learning.
Module Aim:	To provide the student with a basic knowledge of computer aided design
Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Produce, edit and print a variety of engineering parts using a CAD system.
LO2	Produce a portfolio of assembly drawings to ISO standards in First and Third angle projection using CAD software.
LO3	Identify and draw standard circuit diagrams for listed mechanical, pneumatic and hydraulic components.
LO4	Interpret, from workings drawings, ISO tolerances and Machining & Finishing symbols.
Pre-requisite learning	
Module Recommendations	
<i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content

Engineering nomenclature

Symbols for compressors, filters, actuators, non-return valves, gate valves, reservoirs, gauges, pressure reducing valves and other devices. Conventions for pneumatic flow diagrams. Standard diagrams for pressure measurement, flow measurement and pneumatic control systems. Conventions and symbols for the manufacture of components. Design of components & Interpretation of drawings.

Computer Aided Drafting

Introduction to basic CAD concepts (constraints & relations, Third and first angle projection). Basic editing and drawing commands. Introduction to design intent. Enhancing CAD drawings with text, symbols and blocks. Adding and editing dimensions with different dimensioning styles. File management.

Assessment Breakdown

	%
Continuous Assessment	100.00%

Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Apply basic techniques for creating 3D CAD model	1	25.00	Week 4
Portfolio	Produce 2D drawings of parts	1,2	35.00	Week 8
Practical/Skills Evaluation	Produce assembly drawings of mechanical parts.	3,4	40.00	Sem 1 End

No Project

No Practical

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>
Lecture	12 Weeks per Stage	1.00
Lab/Lecture	12 Weeks per Stage	3.00
Independent Learning	15 Weeks per Stage	5.13
Total Hours		125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_EMMEC_B	Bachelor of Engineering (Honours) in Mechanical Engineering	1	Mandatory
CW_EEROB_B	Bachelor of Engineering (Honours) in Robotics and Automated Systems	1	Mandatory
CW_EEMEC_D	Bachelor of Engineering in Mechanical Engineering	1	Mandatory
CW_EEROO_D	Bachelor of Engineering in Robotics and Automated Systems	1	Mandatory