Module Title:	Information Technology and CAD
Language of Instruction:	English

Credits:	10

NFQ Level:	6

Module Delivered In	No Programmes

Teaching & Learning Strategies:	• Studio-based project & problem-based learning to develop the learners' problem- solving methodology to an advanced level, in an architectural technology context, with one-to-one reviews/tutorials and group/class 'crits' to provide student feedback • Group/team work utilised as appropriate • Lecture format utilised to provide theoretical instruction in CAD/Revit/Word/Excel/PowerPoint software tools.

Module Aim:	The aims of this module are : To integrate computer aided design (CAD) into Studio Projects. To introduce students to BIM and computer aided design software, information and communication technologies in order to communicate effectively in a modern technical environment. Create vertical and horizontal details using drafting views in Revit Architecture.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	COMPUTER AIDED DESIGN • Prepare good quality working drawings of domestic buildings in CAD. • Create and modify geometry, layers, blocks, attributes, dimensions, draw accurately, layouts, print, and share drawings with others.
LO2	COMPUTER AIDED DESIGN • Import a coordinate list into Civil 3D and terrain a model, generating contours, levels, and sections. • Create good quality working drawings of a site plan and longitudinal section of a private site layout, using your domestic building. • Create, edit and print a wide variety of construction drawings generally following a set of architectural drawing conventions.
LO3	BUILDING INFORMATION MODELLING (BIM) Create vertical and horlzontal details fully annotated using drafting view in Revit Architecture.
LO4	INFORMATION TECHNOLOGY • To describe the main features of a computer system and the use of computer software as an architectural and communication tool.
LO5	INFORMATION TECHNOLOGY • To create, edit and print a variety of word processing, database and spreadsheet documents and to prepare PowerPoint slide presentations • To use web browsing effectively to extract relevant information. • Prepare good quality reports, letters and graphical presentations for various stages of architectural projects.

Pre-requisite learning	
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*	
6675	TECH H1507	Information Technology & CAD

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

COMPUTER AIDED DESIGN
• Organise the AutoCAD user interface • Perform basic maintenance • Use file management • Input with the keyboard and mouse • Input coordinate entries • Create and edit drawings • Use AutoCAD function keys • Customise the right mouse button • Insert dynamic inputs • Use Layer tools • Use AutoCAD hatch, text, dimensioning and annotation functions • Use basic block, dynamic blocks and attributes. • Control the use of layout and sheets • Control the AutoCAD display and plotting environments • Share data working with other applications Word and Excel • Extract a coordinate list from a survey. Import the coordinate list into Civil 3D, generate a model and export the information in AutoCAD maintaining a real- world scale. • Scan an ordnance survey map and scale reference it to real life size using the OS scale bar as reference. • Produce good quality working drawings of residential projects fully annotated and dimensioned, using A4, A3, A2 and A1 sheet with multiple viewports. • Create good quality working drawings of a site plan and longitudinal section of a residential project showing services, drainage, access, and landscaping fully annotated and dimensioned.

BUILDING INFORMATION MODELLING (BIM)
Create vertical and horizontal details using drafting views fully annotated and dimensioned in Revit Architecture.

INFORMATION TECHNOLOGY
MS Word 2013: • The Word window: Basics • Formatting Paragraphs and Working with Styles • Report writing :Adding Bullets and Numbers, using References, Setting Page Layouts and Printing Documents MS Excel 2013: • Entering Text and Numbers • Entering Excel Formulas and Formatting Data • Creating Excel Functions, Filling Cells, and Printing • Creating charts MS PowerPoint 2013: • The PowerPoint Window: Basics • Creating PowerPoint Presentations: Create a Title Slide ,Create New Slides ,Make Changes to ,Apply a Theme ,Run PowerPoint Slide Show • Animations, Transitions, Spell Check, Outline Tab, Slides Tabs, Sorter View, and Printing

Assessment Breakdown	%
Project	100.00%

No Continuous Assessment

Project

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	• Formative assessment given through one-to-one reviews/tutorials and group/class 'crits' & reviews • Structured marking of projects as continuous assessment, involving allocation of marks for: - Final drawings, details, specifications, schedules, reports, presentations and posters 100%	1,2,3,4,5	100.00	End-of-Semester

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		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	30 Weeks per Stage	4.00
Estimated Learner Hours	30 Weeks per Stage	6.00
	Total Hours	300.00