SERV C1503: Building Services 1

Module Title:	Building Services 1
Language of Instruction:	English

Credits:	5

NFQ Level:	6

Module Delivered In	3 programme(s)

Teaching & Learning Strategies:	Lectures projects Private study

Module Aim:	The aim of Building Services 1 is (1) to give students a basic knowledge of the technology associated with the installation and operation of electrical, water supply, water drainage, lighting and sound services, and (2) to give the student an appreciation of how the building shell and the services are interlinked.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Demonstrate through sketches, written descriptions and applied calculations a knowledge of the electrical services used to power a building and a building site
LO2	Demonstrate through sketches, written descriptions and applied calculations a knowledge of the hot and cold water supply to a building
LO3	Demonstrate through sketches, written descriptions and applied calculations a knowledge of waste water, soiled water and rainwater drainage from a building
LO4	Demonstrate through sketches, written descriptions and applied calculations a knowledge of the lighting and sound design requirements of a building

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
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

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Module Content & Assessment

Indicative Content
Electrical Services (12 hours) (a) Electrical circuits - ring, radial and lighting (b) Electrical distribution –switchboards, switch rooms, distribution boards, busbars, metering, switches, sockets, cables types and sizes, cable trays, conduits and trunking (c) Electrical protection – MCBs, RCDs, RCBOs, fuses (d) Non-domestic electrical supply (e) Site specific electrical requirements (f) Electrical equipment in hazardous areas (g) Basic electrical sizing calculations (h) Building Services Controls (i) Smart Technologies (j) lifts and escalators
Water Supply (8 hours) (a) Cold water storage tank sizing (b) Mains, cold, hot and fire water service pipe sizing (c) Hot water storage tank or calorifier sizing (d) Rain and grey water harvesting
Water Drainage (12 hours) (a) Soils and Waste water pipe sizing above ground (b) below ground drainage pipe sizing and falls (c) Roof drainage (d) downpipe sizing (e) Underground drainage pipe sizing (f) SUDS - sustainable urban drainage systems
Sound (8h) a) Sound levels and transmission (b) Noise control legislation (c) Building acoustics and reverberation (d) Sound Insulation
Lighting (8h) a) Artificial and natural illumination (b) Lighting demands and levels

Assessment Breakdown	%
Project	40.00%
End of Module Formal Examination	60.00%

No Continuous Assessment

Project				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Project	Short projects applying class based knowledge in the areas of electricity, water supply and drainage, light and sound.	1,2,3,4	40.00	Sem 1 End

No Practical

End of Module Formal Examination				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Formal Exam	No Description	1,2,3,4	60.00	End-of-Semester

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

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Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	12 Weeks per Stage	4.00
Estimated Learner Hours	12 Weeks per Stage	2.00
Project	12 Weeks per Stage	2.00
	Total Hours	96.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_CMOPT_B	Bachelor of Science (Honours) in Construction Management	2	Mandatory
CW_CMQSU_B	Bachelor of Science (Honours) in Quantity Surveying	2	Mandatory
CW_CMBSE_D	Bachelor of Science in Construction Management	2	Mandatory