

Full Title:	Building Services 2
Language of Instruction:	English
Module Code:	BLDS E8021
Credits:	5
Valid From:	Semester 1 - 2019/20 (June 2019)
Module Delivered in	6 programme(s)
Module Description:	This module aims to provide the student with an understanding to discuss and appraise mechanical ventilation systems, fire protection systems, security systems, communication systems, energy auditing and conservation
Learning Outcomes:	
<i>On successful completion of this module the learner should be able to</i>	
<ol style="list-style-type: none"> 1. Explain, discuss and appraise ventilation and air conditioning , fire protection, internal transport, security and IT communication systems. 2. Explain, discuss and appraise matters regarding accommodation, co-ordination, distribution and integration of major building services plant. 3. Explain discuss and appraise the concepts energy audits and conservation of energy for residential and non-residential buildings 	

Module Content & Assessment

Indicative Content
<p>Ventilation systems Ventilation needs, natural and passive ventilation; mechanical supply and extract systems, heat recovery, ductwork, local/room ventilation components, controls and actuators, calculation of size of ventilation plant, cooling loads, free cooling; introduction to air conditioning systems.</p>
<p>Fire protection systems Fire detection and Alarm systems; fire dampers and Stopping; smoke extraction and ventilation: sprinkler systems in low and high rise buildings; portable fire extinguishers and blankets.</p>
<p>Internal transport Electric and Hydraulic Lifts and safety features; escalators function and layout ; Travelators layout and function</p>
<p>IT/communication systems Basic requirements of IT systems and an introduction to BMS (building management systems) in relation to building services</p>
<p>Co-ordination and Integration of Services Accommodation of major services and plant, service ducts and risers, principle guidelines for plant room sizes, ceiling and floor void spaces, maintenance and access.</p>
<p>Energy Auditing and Conservation SEI Energy Audits and surveys, benchmarking monitoring and targeting, conservation techniques in energy; international best practice and examples</p>
<p>Security Principles of security deterrents; security alarm systems; security doors and windows; security lighting and CCTV; security fencing.</p>

Assessment Breakdown	%
Course Work	40.00%
End of Module Formal Examination	60.00%

Full Time

Course Work							
Assessment Type	Assessment Description	Outcome addressed	% of total	Marks Out Of	Pass Marks	Assessment Date	Duration
Continuous Assessment	Fire Alarm system design for small commercial building	None	5.00	0	0	n/a	0
Continuous Assessment	Report on Mechanical Ventilation and/or Air Conditioning systems and/or internal transport systems and/or security systems and or IT/Communication systems of selected building(s)	2,3	15.00	0	0	n/a	0
Continuous Assessment	Carry out energy audit on domestic premises	3	20.00	0	0	n/a	0

No Project

No Practical

End of Module Formal Examination							
Assessment Type	Assessment Description	Outcome addressed	% of total	Marks Out Of	Pass Marks	Assessment Date	Duration
Formal Exam	End-of-Semester Final Examination	None	60.00	100	40	End-of-Semester	0

Reassessment Requirement**A repeat examination**

Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.

Reassessment Description

Students will be given the opportunity to remediate part or all of their CA performance by the autumn/repeat examinations board by repeating part or all of the same or similar CA.

DKIT reserves the right to alter the nature and timings of assessment

Module Workload & Resources

Workload: Full Time

Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	theory based	2.00	Every Week	2.00
Practical	includes guidance on CA, tutorials on calculation type questions, visits to plant rooms and DKIT buildings	2.00	Every Week	2.00
Independent Study	for exam preparation	2.00	Every Week	2.00
Directed Reading	theory based	1.00	Every Week	1.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				4.00

This course has no Part Time workload.

Resources
<i>Recommended Book Resources</i>
<p>Greeno R., <i>Building Services Technology & Design</i>, Addison Wesley Longman 3rd Ed., 2000 ISBN 0582279410</p> <p>CIBSE, <i>CIBSE Concise Handbook</i>, CIBSE 2003 ISBN 1903287448</p> <p>CIBSE, <i>Guide F Energy Efficiency in Buildings</i> [ISBN: 1903287340]</p> <p>Environmental Protection Agency EPA, <i>Guidance Notes On Energy Efficiency Auditing</i></p> <p>BSRIA, <i>Illustrated Guide To Mechanical Building Services</i> [ISBN: 9780860227090]</p> <p>Poyner B. and Fawcett W. 1995, <i>Design for Inherent Security; guidance for non-residential buildings.</i> [ISBN: 0860174166]</p> <p>Paul Tymkow, <i>Building Services Design for Energy Efficient Buildings</i></p>
<i>Supplementary Book Resources</i>
<p>Chadderton D., <i>Building Services Engineering</i>, EF Spon 2004 ISBN 0415315352</p> <p>DOE, <i>Building Regulations and Technical Guidance Documents</i>, Stationary Office</p>
<i>This module does not have any article/paper resources</i>
<i>Other Resources</i>
<p>n/a: <i>Library Electronic databases including IHS.</i></p> <p>n/a: <i>CIBSE - Building Services Journal</i></p> <p>n/a: <i>www.cibse.org CIBSE (Chartered Institution of Building Services Engineers)</i></p> <p>n/a: <i>www.sei.ie Sustainable Energy Ireland</i></p>

Module Delivered in

Programme Code	Programme	Semester	Delivery
DK_EARCT_8	Bachelor of Science (Honours) in Architectural Technology	3	Mandatory
DK_ECMGT_8	Bachelor of Science (Honours) in Construction Management	3	Mandatory
DK_EARCT_7	Bachelor of Science in Architectural Technology	3	Mandatory
DK_ECMGT_7	Bachelor of Science in Construction Management	3	Mandatory
658	Bachelor of Science in Construction Surveying	4	Mandatory
656	Higher Certificate in Science in Construction Surveying	4	Mandatory