

<b>Full Title:</b>	Building Services 2
<b>Language of Instruction:</b>	English
<b>Module Code:</b>	BDLU I7007
<b>Credits:</b>	5
<b>Valid From:</b>	Semester 1 - 2015/16 ( September 2015 )
<b>Module Delivered in</b>	<a href="#">2 programme(s)</a>
<b>Module Description:</b>	This module aims to familiarise the student on the principles and application of ventilation systems, fire protection systems, IT communication systems, internal transport systems, security systems, energy auditing and conservation and the co-ordination and integration of major services and plant.
<b>Learning Outcomes:</b>	
<i>On successful completion of this module the learner should be able to</i>	
<ol style="list-style-type: none"> <li>1. List and explain natural and mechanical ventilation and air conditioning systems, fire protection systems, IT communication systems, security systems, and internal transport systems.</li> <li>2. List and explain the integration and co-ordination of Building Management systems in relation to building services.</li> <li>3. List and explain concepts regarding energy audits and conservation for residential and non-residential buildings.</li> </ol>	

**Module Content & Assessment**

**Indicative Content**

**Ventilation and Air Conditioning systems**

Ventilation needs, natural 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.

**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.

**Internal transport**

Electric and Hydraulic Lifts and safety features; escalators function and layout ; Travelators layout and function

**IT/communication systems**

Basic requirements of IT systems and an introduction to BMS (building management systems) in relation to Building Services.

**Security Systems**

Principles of security deterrents; security alarm systems; security doors and windows; security lighting and CCTV; security fencing

**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

**Energy Auditing and Conservation**

SEI Energy Audits and surveys; benchmarking monitoring and targeting; conservation techniques of energy ; international best practice and examples;

**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	Essay/drawing on fire engineering	1,2	5.00	0	0	n/a	0
Continuous Assessment	Examination on design of mechanical , air conditioning, communication, security, internal transport systems and building management systems	1,2	20.00	0	0	n/a	0
Continuous Assessment	Energy auditing and conservation of energy to compare best practice and make recommendations	3	15.00	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	0	0	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.*

**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	n/a	2.00	Every Week	2.00
Practical	n/a	2.00	Every Week	2.00
Directed Reading	No Description	1.00	Every Week	1.00
Independent Study	No Description	2.00	Every Week	2.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				4.00

**This course has no Part Time workload.**

### Resources

*Recommended Book Resources*

**ETCI, National Wiring Regulations**

**R Greeno, Building Services Technology and Design [ISBN: 9780750682206]**

**CIBSE, Concise Handbook [ISBN: 9781903287941]**

**BSRIA, Illustrated Guide To Electrical Building Services [ISBN: 9780860226536]**

**Poyner B. Fawcett W. 1995, Design for inherent security : guidance for non-residential buildings [ISBN: 0860174166]**

*This module does not have any article/paper resources*

*This module does not have any other resources*

### Module Delivered in

Programme Code	Programme	Semester	Delivery
DK_ECTEC_7	<a href="#">Bachelor of Science in Construction Technology</a>	3	Mandatory
657	<a href="#">Higher Certificate in Science in Construction Technology</a>	3	Mandatory