

<b>Full Title:</b>	Electrical Services Design 1
<b>Module Code:</b>	53424
<b>Credits:</b>	5
<b>Valid From:</b>	Semester 1 - 2014/15 ( September 2014 )
<b>Module Delivered in</b>	<a href="#">1 programme(s)</a>
<b>Module Description:</b>	<p>Electrical services are an important part of every modern building – from the supply of single or three-phase power to air-conditioning, lighting, system controls, to lift motors etc. This module will provide an opportunity for the students taking the Electrical option to develop expertise in this area with a particular focus the requirements for domestic and similar buildings. The aims of this module are: 1.To enable students to calculate power requirements for equipment and for domestic and similar buildings. 2.To enable the student to specify electrical services in buildings to appropriate standards. 3.To understand the operation of the electrical equipment found in buildings. 4.To understand how electrical power is supplied to buildings.</p>
<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. Calculate electrical power requirements for equipment and for buildings.</li> <li>2. Summarise how electrical power is supplied to buildings.</li> <li>3. Specify and detail electrical services in a safe manner.</li> <li>4. Interpret current electrical engineering standards for domestic and commercial buildings.</li> <li>5. Summarise the operation of electrical appliances and equipment</li> </ol>	

### Module Content & Assessment

Indicative Content
<b>Electrical Safety, Earthing, RCD's</b> n/a
<b>Power Factor Correction systems</b> n/a
<b>Electrical Power Distribution from National Grid to within buildings</b> n/a
<b>Switchgear and overcurrent protection</b> n/a
<b>Metering, Tarriffs and Load factor</b> n/a
<b>Testing and verification of installations</b> n/a
<b>Principles of artificial lighting</b> n/a
<b>Electric Water and Space Heating</b> n/a

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	Practical laboratory-based exercises and directed assignments	1,2,3,4,5	40.00	100	40	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	1,2,3,4,5	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

Electrical Power measurements have significant H&S risks and may only be attempted in a supervised laboratory. A limited period of time will be made available to learners seeking to recover experimental and other CA. Any augmented CA will be considered by the Autumn Board Meeting

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	No Description	2.00	Every Week	2.00
Practical	No Description	1.00	Every Week	1.00
Tutorial	No Description	1.00	Every Week	1.00
Directed Reading	No Description	1.50	Every Week	1.50
Independent Study	No Description	3.50	Every Week	3.50
Total Weekly Learner Workload				9.00
Total Weekly Contact Hours				4.00

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

**Resources**

*Recommended Book Resources*

Trevor Linsley 2005, *Basic Electrical Installation Work*, 4th Ed.  
 Brian Scaden 2002, *Electrical Installation Work*, 3rd Ed., Newnes  
 ETCI 2008, *National Rules for Electrical Installation*, 4th Ed., ETCI Dublin  
 CIBSE 2009, *SLL Lighting Handbook*, CIBSE  
 CIBSE 2000, *Guide H Building Control Systems*, CIBSE

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

*Other Resources*

Website: [www.esb.ie](http://www.esb.ie)  
 Website: [www.etc.i.ie](http://www.etc.i.ie)  
 Website: [www.sei.ie](http://www.sei.ie)

**Module Delivered in**

Programme Code	Programme	Semester	Delivery
DK_EELES_7	<a href="#">Bachelor of Engineering in Electrical and Electronic Systems</a>	5	Group Elective 2