

Liverpool John Moores University

Title: ELECTRICITY, ELECTRONICS AND FIELDS
Status: Definitive
Code: **3000BELEN** (101126)
Version Start Date: 01-08-2011

Owning School/Faculty: Arts, Professional and Social Studies
Teaching School/Faculty: Bellerby's College - Brighton

Team	Leader
Jarmila Hickman	Y

Academic Level: FHEQ3 **Credit Value:** 12.00 **Total Delivered Hours:** 68.50
Total Learning Hours: 120 **Private Study:** 51

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	55.000
Practical	11.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Coursework: class tests and homework	15.0	
Test	AS2	Coursework: practical assessment	10.0	
Exam	AS3	Module Examination	75.0	2.50

Aims

To provide the students with some basic knowledge of electricity and electronics so that they may apply the knowledge to real situations in engineering. The students will also be led towards a basic understanding of fields and their effects.

Learning Outcomes

After completing the module the student should be able to:

- 1 Explain the main ideas of electricity and electronics and apply them to practical problems met in engineering, for example, instrumentation.
- 2 Carry out experiments in electricity and electronics in order to confirm theory and present a laboratory report.
- 3 Demonstrate an awareness of the concept of fields and their effect and apply the theoretical framework to solve mathematical and practical problems.
- 4 Utilise data in a consistent set of units.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

report	1	3	4
test	2	4	
EXAM	1	3	4

Outline Syllabus

1. *Electricity and Electronics.*
2. *Fields and their effects.*
3. *Data Analysis.*

Learning Activities

Lecture-style lessons to small classes, practical tasks and assessments, formative assignments, terminal module examination.

References

Course Material	Book
Author	Adams and Allday
Publishing Year	2000
Title	Advanced Physics
Subtitle	
Edition	
Publisher	OUP Oxford
ISBN	9780199146802

Course Material	Book
Author	Akrill, Bennet and Millar
Publishing Year	2000

Title	Practice in Physics
Subtitle	
Edition	3rd Edition
Publisher	Hodder Murray
ISBN	9780340758137

Course Material	Book
Author	Nelkon & Parker
Publishing Year	1995
Title	A Level Physics
Subtitle	
Edition	
Publisher	Heinemann
ISBN	0780435923037

Notes

Module aims to prepare students for Engineering courses, particularly in the field of Electrical and Electronic Engineering. It provides basic theoretical materials and an opportunity to test these in laboratory based practical tasks, while developing essential practical skills.