Liverpool John Moores University

Title:	College Physics 2
Status:	Definitive
Code:	**3105CIT** (125296)
Version Start Date:	01-08-2021
Owning School/Faculty:	Engineering
Teaching School/Faculty:	Changshu Institute of Technology

Team	Leader
Rebecca Bartlett	Y
Clifford Mayhew	

Academic Level:	FHEQ3	**Credit Value:**	20	**Total Delivered Hours:**	82
Total Learning Hours:	200	**Private Study:**	118		

Delivery Options
Course typically offered: S2, Summer NS2 (S2 for Jan)

Component	Contact Hours
Lecture	64
Practical	16

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	60	2
Report	AS2	Programming and Report	40	

Aims

This module is to provide the foundation physics of Particles, Fields and Electricity to analyse simple physical systems.

Learning Outcomes

After completing the module the student should be able to:

1	Know the components of the atom, master the charge and quality, learn how to determine the size of the nucleus and its behaviour.
2	Explain the principles and behaviour of the Coulomb force and the electric field, explaining the resistance, capacitance and inductance.
3	Give Mathematical Description of Simple Field Method and Its Application
4	Know the principles of the semiconductor model

Learning Outcomes of Assessments

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

End of year examination	1	2	3
Report	2	3	4

Outline Syllabus

((i) Electromagnetic particles Introduction, charge, Coulomb 's law
*(*ii*) Electric field, electric field strength and calculation, field superposition principle, electric field intensity flux*
*(*iii*) Gauss 's theorem, using Gauss' s theorem to find a special electric field distribution*
*(*iv*) Electromagnetic field loop theorem, potential energy, potential and potential calculation*
*(*v*) Exercises, case studies*

Learning Activities

A combination of series of lectures with some laboratory activities

Notes

This module provides a basis physics of Particles, Fields and Electricity to analyze simple physical systems.
For each topic area of the syllabus, relevant typical experiments will be provided.