

Basic details

UID Cohorts covered

Earliest cohort	Latest cohort
2020-21	<input type="text"/>

Long title

New code New short title

Brief description of module (approx. 600 chars.) 568 characters

Available as a standalone module/ short course?

Statutory details

	ECTS	CATS	Non-credit	HECOS codes
Credit value	10	20	N	<input type="text"/>
FHEQ level	5			<input type="text"/>
				<input type="text"/>
				<input type="text"/>

Allocation of study hours

	Hours	
Lectures	3	
Group teaching	0	<i>Incl. seminars, tutorials, problem classes.</i>
Lab/ practical	128	
Other scheduled	4	<i>Incl. project supervision, fieldwork, external visits.</i>
Independent study	115	<i>Incl. wider reading/ practice, follow-up work, completion of assessments, revisions.</i>
Placement		<i>Incl. work-based learning and study that occurs overseas.</i>
Total hours	250	
ECTS ratio	25.00	

Project/placement activity

Is placement activity allowed?

Module delivery

Delivery mode	<input type="text" value="Taught/ Campus"/>	Other	<input type="text"/>
Delivery term	<input type="text" value="Year-long"/>	Other	<input type="text" value="(term 1 and 2)"/>

Ownership

Primary department

Additional teaching departments

Delivery campus

Collaborative delivery

Collaborative delivery?

External institution
 External department
 External campus

Associated staff

Role	CID	Given name	Surname
Module Leader		David	Colling
		Robert	Kingham

Learning and teaching

Module description

Learning outcomes	On completion of this module you will be able to: 1) Test and construct theories by collecting, analysing and interpreting real, measured data. 2) Use a range of technical and practical specialist laboratory skills and describe the limitations of the equipment used. 3) Based on initial research, design and perform extensions to address open-ended questions
Module content	In the laboratory students perform 3 experiments (two compulsory - interferometry and radioactivity - one an option from solid state physics, and waves & wave propagation). The experiments are generally scripted in such a way as to introduce the students to the topic and equipment, using this to perform important tests of the relevant theories, before encouraging more open-ended investigations that the students plan and perform themselves. The students are expected to maintain an accurate lab book, analyse their data and
Learning and Teaching Approach	The module runs in Terms 1 and 2 with two five-week cycles per term. Three of the cycles are laboratory based, one is computing. In all cases the first four weeks of a cycle are exclusively for laboratory or computer-suite time with two three-hour sessions timetabled per week per student. There are between 16 and 32 students assigned to each experiment/computer session. Each experiment has an experienced staff member who acts as a
Assessment Strategy	For laboratory half of the grade is for for laboratory skills - a combination of practical laboratory skills, lab book usage, quality of data recording and general professional skills in a laboratory context. Half of the grade is for a formal report with assessment criteria on structure, language, content and depth of understanding. Grades and feedback are originally drafted by a single demonstrator and then refined and adjusted at a markers' meeting with the final grade decided by the head of experiment.
Feedback	Formative feedback on real-time progress is continual for laboratory and computing as demonstrators are proactive in providing advice and assistance. Reports and code are marked by the demonstrators using a set of well-defined assessment criteria, that are clearly laid out to the students at the start of the year. Report marking includes detailed written feedback on the different aspects of the report – style, language, use of graphs, error analysis etc – all aimed to help the students improve their scientific writing ability.
Reading list	There are no text books for this module. Lab scripts are provided.



Quality assurance

Office use only

Date of first approval

Date of last revision

Date of this approval

QA Lead

Department staff

Date of collection

Module leader

Date exported

Date imported

Notes/ comments

Programme structure

Associated modules

UID	Legacy code	Module title	Requisite type
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UID

Legacy code

Module title

Requisite type



Assessment details

Grading method	Numeric	Pass mark	40%
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Assessments

Assessment type	Assessment description	Weighting	Pass mark	Must pass?
Practical	Laboratory: assessment of day-to-day work in the laboratory	37.5%	40%	N
Coursework	Laboratory: three reports	37.5%	40%	N
Practical	Computing: online tests	4.0%	40%	N
Coursework	Computing: submitted code and outputs	15.0%	40%	N
Coursework	Computing: two-page summary report	6.0%	40%	N

100%