

# PX428-15 Physics Laboratory

**24/25**

**Department**

Physics

**Level**

Undergraduate Level 4

**Module leader**

Andrew Howes

**Credit value**

15

**Module duration**

10 weeks

**Assessment**

100% coursework

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

The module builds on experience gained during the first and second year laboratories. The work is less structured than in earlier years, more open ended and normally performed in groups of three. You are expected to take more responsibility for the planning and direction of your work than in previous years. This will prepare you for independent research within a team, and for the project work next year.

[Module web page](#)

### Module aims

To develop experimental skills

### Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

There are 10 scheduled sessions from 11am to 5pm. Many of the experiments require data collection over an extended period of time, so some work outside the scheduled times is expected. Students will perform 3 experiments, one of which will be a computer experiment. Students will

normally work in groups of three. Where possible, variations in the experiments are encouraged. A joint report, in the form of a publication, will be submitted from each group one week after completing the experiment.

The laboratory is staffed by members of academic staff and postgraduate demonstrators. There is a interaction between staff and students throughout the operation of the laboratory, and also outside formally timetabled hours.

## Learning outcomes

By the end of the module, students should be able to:

- Progress, and report on, an experimental study in collaboration with others
- Start an experimental project
- Acquire and process data on a computer
- Use models and simulations to represent complex physical systems

## Subject specific skills

Analysis of techniques and results, computer simulation, discussing with collaborators, writing in research paper format

## Transferable skills

Analytical, communication, IT, organisational, problem-solving, self-study

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## Study

### Study time

Type	Required
Lectures	1 session of 3 hours (2%)
Practical classes	9 sessions of 6 hours (36%)
Private study	93 hours (62%)
Total	150 hours

### Private study description

Analysis of techniques and results, discussing with partners, maintaining lab book, reading and working through background material, report-writing

## Costs

No further costs have been identified for this module.

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## Assessment

You do not need to pass all assessment components to pass the module.

### Assessment group A1

	<b>Weighting</b>	<b>Study time</b>
Report on the experiments completed	100%	
Report written in research paper format		

### Feedback on assessment

Written and oral comments from the markers, interaction with demonstrators in the laboratory

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## Availability

### Courses

This module is Core for:

- Year 3 of UPXA-F303 Undergraduate Physics (MPhys)