

PH450 Project Overview

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IOP Institute of Physics

The Physics Degree

PROJECT WORK

PH450 Project

40 Credits



1. BSc degree programmes must incorporate either a **project or dissertation** in the final year. Students should **not be able to graduate without** having carried out a project or dissertation. Integrated Masters programmes must incorporate extended project work as a substantial part of the final year. Additional requirements for integrated Masters degrees are detailed on the next page.
2. Final year project work may be undertaken individually, in pairs or in groups but degree programmes should allow students to experience both individual and group project work.
3. Projects may be **experimental**, observational, **computational or theoretical** depending on the topic and the **available facilities**.
4. The objectives of such project work will include **most of the following**:
 - **Investigation** of a physics-based or physics-related problem
 - **Planning, management and operation** of an investigation to test a hypothesis
 - Development of **information retrieval skills**
 - **Carrying out a health and safety assessment**
 - Establishment of **co-operative working practices** with colleagues
 - **Design, assembly and testing** of equipment or software
 - Generation and **informed analysis** of data and a critical assessment of experimental (or other) uncertainties
 - Formulation of **appropriate conclusions and a critical comparison** with relevant theory
 - Production of a **final written report**
 - **Presentation and defence** of the results of the project

COVID-19 Restrictions!
Most experimental projects infeasible.



University of Strathclyde Glasgow

HOME FIND A CLASS STUDENT EXPERIENCE HELP

Myplace 2020/21

Dashboard / My classes / PH450

Navigation

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- PH1-5
- PH450
 - Participants
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 - Physics Playground
 - STEP: Flipped Classroom
 - Faculty of Science KE
 - 2020 Physics Template
 - CSA_Staff
 - Myplace Staff User Group
 - Personal Development Planning (PDP)
 - PH030, PH100, PH102
 - More...

PH450: Project

General

Arrangements for 2020-21

Update 7/9/2020: Version 1.0 of the list of projects has been released but should still be considered provisional.

The 4th Year Projects face additional challenges over previous years: the cohort is over 50% larger than last year; pandemic restrictions have practically eliminated experimental projects due to lack of lab access; refactoring all teaching as online has and will take up a lot of staff time to deliver taught courses hence workload across the department will need to be managed much more actively.

This will mean a variety of changes for the running of the course, the main ones:

- All projects geared to be able to be run remotely should restrictions continue.
- Project split into 2 parts, Semester 1 and Semester 2. Semester 1 will cover background to the project and may involve analysis, reproduction, or assessment of existing work, leading to a short report worth 20% of the final mark. Semester 2 will follow on from the preparatory work performed in Semester 1 and will consist of more independent tasks. The assessment will consist of a presentation (worth 10%), Semester 2 report (worth 30%), Supervisor mark (worth 20%) and a viva (worth 20%). The format of the presentation and viva may be subject to pandemic restrictions.
- Project allocation will need to be more flexible to evenly distribute numbers across department in light of the intensified workload pressure on staff. Reasonable attempts will be made to employ previously used ranking criteria but slight shuffling within a small marks band may occur.

Class Representative Reporting Tool

There is no class rep assigned! Find out more?

Course timetable

Timetable for this class (PH450)

Help

University Weeks

Timetable Explained

Notices

- PH450 Project Information Sessions
- PH450 Draft Project List v0.2
- PH450 Projects



- PH450 Project **Information**
 - List of Projects
 - Project Preference/Selection
 - Report/Presentation Templates, Forms
 - Guidance
- **Handing In**
 - Initial Report
 - Presentation
 - Final Report



PH450 Schedule

	Wk	W/C	Date	Event
Semester 1	0	14/09/2020	18/09/2020	Project Preferences Due at Noon via MyPlace
	1	21/09/2020	23/09/2020	Release of Project Allocation (Round 1)
	2	28/09/2020		
	3	05/10/2020		
	4	12/10/2020		
	5	19/10/2020		
	6	26/10/2020	28/10/2020	Safety Induction Form (if required) via MyPlace
	7	02/11/2020		
	8	09/11/2020		
	9	16/11/2020		
	10	23/11/2020		
	11	30/11/2020		
		07/12/2020		
		14/12/2020		
		21/12/2020		
		28/12/2020		
		04/01/2021		
Semester 2	0	11/01/2021	11/01/2021	First Report due at Noon via MyPlace (20%)
	1	18/01/2021		
	2	25/01/2021		
	3	01/02/2021		
	4	08/02/2021		
	5	15/02/2021		
	6	22/02/2021	22/02/2021	Presentations due at Noon via MyPlace (10%)
	7	01/03/2021		
	8	08/03/2021		
	9	15/03/2021	15/03/2021	Samples Pages for Feedback due via Supervisor
	10	22/03/2021		
	11	29/03/2021		
Exams		05/04/2021	05/04/2021	Final Report due at Noon via MyPlace (30%)
		12/04/2021		
		19/04/2021		
		26/04/2021		
		03/05/2021		
		10/05/2021		
		17/05/2021		

Supervisor Mark (20%)

20% First Report

10% Presentation

30% Final Report

20% Viva

**20% Supervisor Assessment
of Overall Project Work**

Note: Only final mark
will be released as per
Departmental Policy

Project Selection I



- Project listing on MyPlace*
- MyPlace Project Preference Form due Noon Friday 18th September 2020
- Select between **5-10 projects**
- Allocation primarily decided on **3rd year class rank** within a ~few mark band to allow for load balancing and optimising preferences (try to allocate within first 5 preferences)
- Allocation is **subject to supervisor availability** i.e. your choice may not be allocated if supervisor at full load already, and balancing across groups
- 1st Allocation announced Wednesday 23rd September 2019
- **2nd allocation round to follow if unsuccessful in 1st Round**



* PH550 students have priority, some projects may have been pre-allocated, e.g. summer students continuing to work with a research group.

Project Selection II



- Attend information sessions on projects (check schedule)
- If no information session, contact supervisor for further information
- Read the project description closely
 - **Suitability** (BSc, MPhys, etc.), Specialism
 - Pre-requisites
 - Theory, Computational*, (Experimental)
 - Look up the references
- Be tactical in your choices
 - Be realistic, play to your strengths
 - If you don't get any of your first round choices, you will have to wait until the second round



* Computational projects don't necessarily require much programming

Doing a Project I

- Ideal opportunity to develop **critical thinking** skills apply **knowledge** from other courses to study a topic in **more depth**
- Your **Supervisor**
 - A **guide**, can show you the way but it's up to you to do the work
 - May not know all the answers (but should have an idea of what it should look like)
 - **Busy** person. Help them to help you, e.g. turn up to meetings as arranged, give adequate notice if you can't, do work as agreed (e.g. written work, calculations, summaries) to schedule
- Interactions
 - Keep in **good communication** at all times
 - Develop good email habits
 - Clear subject heading (label "PH450")
 - Concise, clear, but appropriately detailed messages
 - Respond within a reasonable period
 - **Be prepared** for meetings, e.g. have a summary of progress, agenda, materials asked for
 - Keep **records** of meetings and take notes, useful to email supervisor summary of each meeting
 - Be **professional**



Doing a Project II

- Not like a taught class
 - “New knowledge”, not something you can Google or read in a book*
 - The project is ultimately whatever you make of it
 - **Self-motivation** is absolutely vital, **remain engaged** with the project
 - Cannot “cram”, needs consistent concerted effort
 - Spend **at least 2 days/week on average**, invest your time early
- Project Structure
 - Have a **project plan** and draw up a timetable
 - Set **realistic goals**, revise throughout
- Good records
 - Keep a lab book, document your code, write up calculations
- Writing Up
 - The 2 reports makes up 50% of your mark
 - **Never too early to start writing**, e.g. introduction, background, literature review
 - Give supervisor adequate time to give feedback

