UNSW Course Outline

PHYS4200 Physics Research Project - 2024

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General Course Information

Course Code : PHYS4200
Year : 2024
Term : Term 3
Teaching Period : T3
Is a multi-term course? : No
Faculty : Faculty of Science
Academic Unit : School of Physics
Delivery Mode : Multimodal
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course is a one-term research project for second- and third-year students. Students choose from a set of available supervisors and projects, work regularly in the research groups, and present their results to a group of peers and researchers. This course serves as an entry point

into physics research for motivated students.

Course Aims

One main goal of student engagement activities in the School of Physics is to build students' sense of belonging and community in the School. Undergraduate research projects serve this purpose by providing students with a first-hand experience of carrying out research, building their self-efficacy and image of themselves as future researchers. Carrying out the research project within a research group allows the student to develop personal relationships with academics and older students, making those more senior researchers more approachable and creating the possibility of future mentoring relationships. Placing the research projects in a course context with the final presentations as a shared assessment, with an audience of other undergraduate research students, helps with cohort building and developing relationships between students .

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Explain the context and motivation for a key question in a topic of contemporary physics research.
CLO2 : Explain the procedures for carrying out experiments or other investigations in a topic of contemporary physics research.
CLO3 : Apply basic experimental, theoretical, and/or computational skills to a topic of contemporary physics research.
CLO4 : Effectively communicate scientific information including the research process and results in written and oral form to diverse audiences.

Course Learning Outcomes	Assessment Item
CLO1 : Explain the context and motivation for a key question in a topic of contemporary physics research.	• Report • Research performance • Seminar
CLO2 : Explain the procedures for carrying out experiments or other investigations in a topic of contemporary physics research.	• Report • Research performance • Seminar
CLO3 : Apply basic experimental, theoretical, and/or computational skills to a topic of contemporary physics research.	
CLO4 : Effectively communicate scientific information including the research process and results in written and oral form to diverse audiences.	• Report • Seminar

Learning and Teaching Technologies

Moodle - Learning Management System

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Report Assessment Format: Individual Short Extension: Yes (3 days)	50%	
Research performance Assessment Format: Individual	30%	
Seminar Assessment Format: Individual Short Extension: Yes (7 days)	20%	

Assessment Details

Report

Assessment Overview

You will write a 5-10 page report on your research project, and hand it in to your supervisor during Week 10.

Comments and suggestions on an early draft of your report will be available from your supervisor during the term.

Characteristics that may be considered when marking include: literature review, understanding of the principles, clarity of expression, organisation and soundness of arguments, techniques, presentation of results, suggestions for further work.

This report will be marked by your supervisor and another academic, and their comments will be compiled and delivered to you by the course convenor.

Course Learning Outcomes

- CLO1 : Explain the context and motivation for a key question in a topic of contemporary physics research.
- CLO2 : Explain the procedures for carrying out experiments or other investigations in a topic of contemporary physics research.
- CLO4 : Effectively communicate scientific information including the research process and results in written and oral form to diverse audiences.

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.
If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.
For more information on Generative AI and permitted use please see here.

Research performance

Assessment Overview

You will conduct a research project under the supervision of a member of the academic staff. Your project may involve conducting experiments in the laboratory, analysis of data from observations, theoretical calculations, or some combination of the above.
At the end of the term, your supervisor will mark your research performance. They will also provide you with feedback on your performance during the term. Some characteristics your supervisor may wish to assess include: your approach to the problem, preparatory reading, planning of experimental work, design of apparatus, independence, execution of the research, diligence, understanding of the principles, experimental technique, judgment.

Course Learning Outcomes

- CLO1 : Explain the context and motivation for a key question in a topic of contemporary physics research.
- CLO2 : Explain the procedures for carrying out experiments or other investigations in a topic of contemporary physics research.

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

Not Applicable

Generative AI is not considered to be of assistance to you in completing this assessment. If you do use generative AI in completing this assessment, you should attribute its use.

For more information on Generative AI and permitted use please see here.

Seminar

Assessment Overview

You will give a ten-minute presentation at the end of the term, covering the motivation, process, and results of your research project to an audience of academics and other research students. This presentation can be delivered alone or with a research partner.
The presentation will be marked based on the clarity of explanation of the project aims, quality of the presentation, relevance of the results, and delivery. Audience feedback will be collected online, then compiled and delivered to you by the course convenor.

Course Learning Outcomes

- CLO1 : Explain the context and motivation for a key question in a topic of contemporary physics research.
- CLO2 : Explain the procedures for carrying out experiments or other investigations in a topic of contemporary physics research.
- CLO4 : Effectively communicate scientific information including the research process and results in written and oral form to diverse audiences.

Assignment submission Turnitin type

This is not a Turnitin assignment

Generative AI Permission Level

Planning/Design Assistance

You are permitted to use generative AI tools, software or services to generate initial ideas, structures, or outlines. However, you must develop or edit those ideas to such a significant extent that what is submitted is your own work, i.e., what is generated by the tool, software or service should not be a part of your final submission. You should keep copies of your iterations to show your Course Authority if there is any uncertainty about the originality of your work.
If your Convenor has concerns that your answer contains passages of AI-generated text or media that have not been sufficiently modified you may be asked to explain your work, but we recognise that you are permitted to use AI generated text and media as a starting point and some traces may remain. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.
For more information on Generative AI and permitted use please see here.

General Assessment Information

Grading Basis

Standard

Course Schedule

Attendance Requirements

Not Applicable - as no class attendance is required

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Sarah Martell					No	Yes
Administrator	Zofia Krawczyk					No	No

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University's conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University's reputation and good standing.

For more information, visit the UNSW Student Code of Conduct Website.

Academic Honesty and Plagarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words,

ideas or research. Not referencing other people's work can constitute plagiarism.
Further information about referencing styles can be located at https://student.unsw.edu.au/referencing

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.
Further information about academic integrity, plagiarism and the use of AI in assessments can be located at:

- The Current Students site,
- The ELISE training site, and
- The Use of AI for assessments site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: https://student.unsw.edu.au/conduct

Submission of Assessment Tasks

Penalty for Late Submissions

UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical

documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: https://student.unsw.edu.au/special-consideration

Important note: UNSW has a "fit to sit/submit" rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- The Current Students Gateway
- Student Support
- Academic Skills and Support
- Student Wellbeing, Health and Safety
- Equitable Learning Services
- UNSW IT Service Centre
- Science EDI Student Initiatives, Offerings and Guidelines