School of Physics

Course Outline 2026

PHYS 4200

Taste of Research

School of Physics

Faculty of Science

T3 2026

1. Staff

Position	Name	Email	Consultation times and locations	Contact Details
Course Convenor	Dipan Sengupta	dipan.sengupta@unsw.edu.au	Consultation times: by arrangement via email	0426146557
Teaching Support Officer	Zofia Krawczyk-Bernotas	z.krawczyk-bernotas@unsw.edu.au	School of Physics office G06, Old Main Building	(02) 9385 5969

2. Course Information

Grading: This course uses competency-based grading, CM/CO/CN (competent with merit/competent/not yet competent), students need to meet a set of milestones, merit will be determined from performance in a presentation and report.

Project selection: Some time in term-2, the school of physics will announce several projects supervised by academics staff. Students will be invited to submit a ranked list of their preferred projects. We will then attempt to match students with supervisors. Once both the student and supervisor agree to the pairing, we will formally enrol the student. Prerequisites for each research project will be determined by the individual supervisors. Supervisors will also design a minimal set of 5-6 tasks for students to complete on a fortnightly schedule. Please note that project allocation is based on mutual consent, and the number of available projects is limited. Not all students can be accommodated. Students may also approach prospective supervisors directly to secure a project before the start of term 3. Enrolment in this case is also subject to mutual consent.

2.1 Course summary

Taste of Research runs in Term 3 each year (and in Semester 2 from 2028). It is intended for third-year undergraduates, although second-year students may participate in exceptional circumstances. Prerequisites are set by the individual project supervisor in the School of Physics. Students enrolled in PHYS4200 will receive course credit, it does not contribute to WAM. To enrol, students must obtain permission from the School. Students who do not want course credit may elect to take a voluntary project. This is not part of PHYS4200.

2.2 Course Aims

The aims of this course are for students to gain experience participating in a research project in physics or astronomy.

Graduate Attributes Developed in this Course:

- Research, inquiry and analytical thinking abilities
- Communication in a scientific/technical context
- Collaborative and management skills
- Information literacy

2.3 Course Learning Outcomes (CLOs)

By the end of this course, you will be able to:

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.

2.4 Relationship between course and program learning outcomes and assessments

The course learning outcomes are assessed in the three assessment tasks. These assessments are largely of a critical-thinking nature designed to determine students' ability to deploy acquired knowledge to new situations, which is a key capability for successful university graduates.

The assessments will need to be linked to the learning outcomes. This is already done in the current ECLIPS record. If learning outcomes are updated it will need to be redone.

3. Strategies and approaches to learning

3.1 Learning and teaching activities

Assumed Knowledge

Passing mark or higher in a course such as PHYS1121/1131/1141, PHYS1221/1231/1241, MATH1131/1141, MATH1231/1241 or equivalent. The prerequisites for Taste of Research depend on the type of projects offered by the supervisor, and will be released with the project description.

The presentation session will be held in Week 11. The milestones are determined based on the project content in consultation between the supervisor and student. Students are expected to communicate with their supervisors regularly, submitting fortnightly reports on how they are tracking against the milestones.

3.2 Expectations of students

We believe that effective learning is best supported by a climate of enquiry, in which students are actively engaged in the learning process. The Taste of Research and Step into Research programs provide students with the opportunity for direct research experience. Effective

learning in this environment is achieved when students ask questions and take initiative.

Academic misconduct will not be tolerated in any form in this course. Substantiated instances of cheating, plagiarism or copying answers may result in a failure grade. Please https://student.unsw.edu.au/plagiarism if you are in any way unsure of what constitutes plagiarism. Assignments in this class are to be done independently.

4. Assessment

There are three assessment tasks in this course, all these tasks are hurdles. A “merit” grade will be awarded to students achieving a specified number of “excellents” in the rubrics for the report and presentation.

4.1

Milestone Updates

Students will record their tasks on the Moodle page, with a short summary of the activities and achievements each fortnight. The supervisor will also record their assessment and observations. The student will be invited to meet with the convenor to discuss their progress and raise any issues. Students must submit at least four of five fortnightly updates at a required standard in order to pass the milestone hurdle.

Presentation

At the end of the term, you will deliver a ten-minute presentation that explains the motivation, methodology, and findings of your research project. Your audience will consist of academics and fellow research students.

Your presentation will be assessed using a rubric that evaluates:

- how clearly you explain the project aims

- the quality and organisation of the presentation
- the relevance and interpretation of your results
- your delivery and engagement with the audience

Your final grade of Competent with Merit (rather than Competent or Not Yet Competent) will be determined by the number of criteria for which you achieve an “Excellent” rating in both the Presentation and Report rubrics.

Report

You will submit a 5–10 page written report on your research project to your supervisor in Week 10.

During the term, you may submit an early draft to your supervisor and receive comments and suggestions to help you strengthen your final report.

Your report will be assessed on characteristics such as:

- quality and relevance of the literature review
- understanding and explanation of underlying principles
- clarity of expression
- organisation and coherence of arguments
- appropriateness of techniques used
- presentation and interpretation of results
- suggestions for future work

Your report will be marked independently by your supervisor and one other academic. Their comments will be compiled and returned to you by the course convenor.

Your final grade of Competent with Merit (rather than Competent or Not Yet Competent) will be determined by the number of criteria for which you achieve an “Excellent” rating in both the Presentation and Report rubrics

5. Academic integrity, referencing and plagiarism

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 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.[1] 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 and **plagiarism** can be located at:

- The *Current Students* site student.unsw.edu.au/plagiarism, and
- The *ELISE* training site subjectguides.library.unsw.edu.au/elise

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

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1 International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T.
Fishman (ed), Clemson University, 2013.

6. Readings and resources

Recommended Text:

By arrangement with the research supervisor

7. Administrative matters

Communications

Students should check their UNSW email account regularly as all official university communication will be sent to that address. Students should use their university email account when writing to UNSW staff and should always include their name and student number.

Health and Safety

The School of Physics is actively committed to the health, safety and welfare of its staff and students. Information on relevant UNSW Occupational Health and Safety policies and expectations is available at: www.ohs.unsw.edu.au and https://www.physics.unsw.edu.au/about/safety

Recommended Internet Sites

The School of Physics website is www.physics.unsw.edu.au. Under the “Current Students” link students will find information about degrees, courses, and assessment.

website my.unsw.edu.au provides links to the UNSW Handbook, Timetables, Calendars and other student information.

Student Complaint Procedures

UNSW has procedures for dealing with complaints. These aim to solve grievances as quickly and as close to the source as possible. Information is available here: student.unsw.edu.au/complaints. Staff who can assist include:

School Contacts:

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Dipan Sengupta

Taste of Research

Coordinator School of Physics

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9. Additional support for students

- The *Current Students* Gateway: student.unsw.edu.au
- Academic Skills and Support: student.unsw.edu.au/skills
- Student Wellbeing, Health and Safety: student.unsw.edu.au/wellbeing
- Disability Support Services: student.unsw.edu.au/disability
- UNSW IT Service Centre: www.it.unsw.edu.au/students