School of Information and Physical Sciences

PHYS4120: Physics Honours 412

Callaghan Semester 2 - 2023



OVERVIEW

Course Description	The Honours Program in Physics is designed to give students an advanced understanding of specific topics in modern physics through coursework and a research project. PHYS4120 and PHYS4220 comprise a research project related to current research interests in Physics.
Requisites	This course is only available to students enrolled in the Bachelor of Science (Honours) program.
Assumed Knowledge Contact Hours	A major in Physics with a Credit grade average in at least 40 units of 3000 level physics courses. Callaghan Individual Supervision * Face to Face On Campus 2 hour(s) per Week for Full Term Meeting and laboratory times will be by arrangement with the
Unit Weighting Workload	 * This contact type has a compulsory requirement. 20 Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.



CRICOS Provider 00109J



CONTACTS

Course Coordinator

Callaghan Dr Lachlan Rogers Lachlan.Rogers@newcastle.edu.au (02) 40557574 Consultation: by appointment

Teaching StaffOther teaching staff will be advised on the course Canvas site.

School Office School of Information and Physical Sciences SR233, Social Sciences Building Callaghan CESE-SIPS-Admin@newcastle.edu.au +61 2 4921 5513 9am-5pm (Mon-Fri)

SYLLABUS

Course Content	PHYS4120 covers the preliminary work towards a major research project supervised by a member of academic staff.
Course Learning Outcomes	On successful completion of this course, students will be able to: 1. Competence in researching the scientific literature
	2. A significantly enhanced understanding of how to apply their knowledge of physics to real physical systems independently and collaboratively
	3. The capacity to devise and employ effective and creative strategies in problem solving, in conducting research, and in analysing and modelling the behaviour of physical systems.
	4. Mastery of a range of experimental, theoretical and/or computational techniques
	5. An enhanced ability to effectively communicate their knowledge of physics to a wide variety of audiences

Course Materials



COMPULSORY REQUIREMENTS

In order to pass this course, each student must complete ALL of the following compulsory requirements:

Contact Hour Requirements:

Individual Supervision Induction Requirement - Students must attend and pass the induction requirements before attending these sessions. In order to participate in this course students must complete a compulsory safety induction.

Course Assessment Requirements:

Pre-Placement Requirements:

ASSESSMENTS

This course has 3 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Induction Workshop WHS quiz Risk assessment Academic Integrity Module		Individual	Formative	1, 2, 3, 4, 5
2	Oral thesis proposal seminar		Individual	Formative	no Learning Outcomes
3	Written Literature Review and Research Plan		Individual	Formative	no Learning Outcomes

Late Submissions The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Assessment 1 - Induction Workshop WHS quiz Risk assessment Academic Integrity Module

Assessment Type	Online Learning Activity
Description	
Weighting	This is a formative assessment and will not contribute to your final grade.
Due Date	
Submission Method	
Assessment Criteria	
Return Method	
Feedback Provided	

Assessment 2 - Oral thesis proposal seminar

Assessment Type Description Presentation



This is a formative assessment and will not contribute to your final grade.

Weighting Due Date Submission Method Assessment Criteria Return Method Feedback Provided

Assessment Type

Submission Method Assessment Criteria Return Method Feedback Provided

Description Weighting

Due Date

Assessment 3 - Written Literature Review and Research Plan

Literature Review

This is a formative assessment and will not contribute to your final grade.

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

*Skills are those identified for the purposes of assessment task(s).

Communication methods used in this course include:

Communication Methods

Course Evaluation

Oral Interviews (Vivas) As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the Oral Examination (viva) Procedure. In cases where the oral examination reveals the assessment item may not be



	the student's own work the case will be dealt with under the Student Conduct Rule.	
Academic Misconduct	All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35.	
Adverse Circumstances	 The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where: the assessment item is a major assessment item; or the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system; you are requesting a change of placement; or the course has a compulsory attendance requirement. Before applying you must refer to the Adverse Circumstance Affecting Assessment Item Procedure available at: https://policies.newcastle.edu.au/document/view-current.php?id=236 	
Important Policy Information	The 'HELP for Students' tab in UoNline contains important information that all students should be familiar with, including various systems, policies and procedures.	

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.

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