

SCIE3500: Research Integrated Learning

Callaghan and Ourimbah
Semester 2 - 2023



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

OVERVIEW

Course Description

This course provides extension material to encourage the development of advanced skills and enhance career progression. This is done through experiential learning supported by appropriate readings and career guidance that allows students to expand the theoretical knowledge and skills developed in their undergraduate program, and integrate these with real world skills and experience through undertaking a supervised practical project.

Students will be able to undertake their project in a variety of settings (including but not limited to laboratory, field and desk-based investigations) and direction is provided on-site by a project supervisor. Assessment is based on a progress report, a research notebook, a final project report and an oral presentation. Students are expected to be highly self-motivated, proactive and maintain regular contact with their academic supervisor for project consultation and assistance. Admission to this course is based on merit and the number of places available may be restricted. Allocation to a project is not guaranteed and is dependent on project availability and the suitability of applications for each project. Students should enquire through the Course Coordinator and/or Program Convenor for advice.

To enrol in this course, students must obtain approval from the Course Coordinator in advance and request for a manual enrolment from the Course Coordinator.

Note: Exemption from the GPA requirement will only be considered in special circumstances and each application for exemption will be considered on its own merit on a case-by-case basis. Students may make a case via written support from a nominated supervisor in their discipline area.

Requisites

This course replaces SCIT3500. Students who have successfully completed SCIT3500 cannot enrol in SCIE3500.

Assumed Knowledge

Students must have successfully completed at least 140 units and have a cumulative GPA of at least 5.0
Completion of 2000 and/or 3000 level courses relevant to the project topic.

Contact Hours

Individual Supervision *
Face to Face On Campus
80 hour(s) per Term Full Term

Lecture
Online
2 hour(s) per Week for 2 Weeks

COURSE OUTLINE

www.newcastle.edu.au

CRICOS Provider 00109J

Seminar *

Face to Face On Campus
8 hour(s) per Week for 1 Weeks

* This contact type has a compulsory requirement.

Unit Weighting

10

Workload

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

CONTACTS

Course Coordinator

Callaghan and Ourimbah

Dr Richard Yu
Richard.Yu@newcastle.edu.au
(02) 4921 6990
Consultation: By appointment, please email.

Teaching Staff

Other teaching staff will be advised on the course Canvas site.

School Office

School of Environmental and Life Sciences

Room C228 Chemistry Building
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9am-5pm (Mon-Fri)

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SYLLABUS

Course Content

Topics will include:

1. Workplace health and safety and the preparation of risk assessments;
2. Project design and implementation in collaboration with a supervisor;
3. Development of project-related methodology and practical procedures;
4. Application and development of research skills and critical thinking;
5. Scientific writing for publication; and
6. Communication of results through oral presentation.

Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Work independently and collaboratively within a team to bring a research project to satisfactory completion;
2. Formulate, conduct and report on a scientific project;
3. Collect, analyse and organise scientific information;
4. Apply theoretical knowledge gained in previous courses within their program to a practical problem;

5. Describe and reflect upon the array of skills required for a career in scientific research.

Course Materials

Lecture Materials:

Lecture handouts are available on the course Canvas site.

Other Resources:

- Workplace Health and Safety (WHS) documents are available on the course Canvas site.

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.
- Seminar There is a compulsory attendance requirement in this course. A minimum 80% compulsory attendance is required. Seminars typically take place over multiple days in the last week of the semester. In approved circumstances, reasonable adjustments are made for those students who cannot meet the 80% attendance requirement.

SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	17 Jul	Occupational Health and Safety An Introduction to Undertaking Research Keeping a Research Notebook	Lecture, online (pre-recorded video)	
2	24 Jul	Supervised research project	Undertake project tasks	
3	31 Jul	Supervised research project	Undertake project tasks	
4	7 Aug	Supervised research project	Undertake project tasks	
5	14 Aug	Supervised research project	Undertake project tasks	
6	21 Aug	Supervised research project	Undertake project tasks	Progress report (Part I): By 5pm, Friday 25 Aug - Email electronic copy to Course Coordinator.
7	28 Aug	Supervised research project	Undertake project tasks	
8	4 Sep	Supervised research project	Undertake project tasks	
9	11 Sep	Supervised research project	Undertake project tasks	
10	18 Sep	Supervised research project Preparing an oral presentation	Undertake project tasks Lecture, online (pre-recorded video)	
Mid Term Break				
Mid Term Break				
11	9 Oct	Supervised research project	Undertake project tasks	
12	16 Oct	Supervised research project	Undertake project tasks	
13	23 Oct	Oral presentation (seminar)	Presentation of research project at SCIE3500 mini-conference	Final project report: By 5pm, Monday 23 Oct - Email electronic copy to Course Coordinator. Research notebook: By 5pm, Monday 23 Oct - Submit in person to Supervisor. Oral presentation: Refer to Canvas announcement for seminar schedule.
Examination Period				
Examination Period				

ASSESSMENTS

This course has 4 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Progress Report	5pm, Friday 25 August 2023	Individual	10%	1, 2, 3, 4
2	Oral Presentation	Week 13 - Please refer to Canvas announcement for the full presentation schedule	Individual	25%	1, 2, 3, 4
3	Research Notebook	5pm, Monday 23 October 2023	Individual	15%	1, 2, 3, 5
4	Final Project Report	5pm, Monday 23 October 2023	Individual	50%	1, 2, 3, 4

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 - Progress Report

Assessment Type Description

Report

The purpose of this report is to summarise students' project progress and consolidate plans for on-time completion of their projects. The progress report has two parts. Part I is to be completed by the Student and Part II is to be completed by the Supervisor. Students must fill out Part I and email the completed form along with their risk assessment document to the Course Coordinator by the submission due date. Students are expected to arrange at least one meeting with their Supervisor to report and discuss their progress before handing in this report. The Course Coordinator will then forward the report to the Supervisor who will complete Part II and email the final report back to the Course Coordinator.

Weighting

10%

Due Date

5pm, Friday 25 August 2023

Submission Method

Online

Submit Part I to Course Coordinator via email

Assessment Criteria

See rubrics on Canvas

Return Method

Online

Feedback Provided

Online - Within 15 University working days of submission. Written feedback provided by the Project Supervisor will be communicated via email by the Course Coordinator

Assessment 2 - Oral Presentation

Assessment Type Description

Presentation

The purpose and benefit of the oral presentation is to develop skills in the synthesis and presentation of scientific research in a form that is ubiquitous in scientific research. It addresses formulating, conducting and reporting on a scientific project and developing experience in collecting, analysing and organising scientific information.

Weighting

25%

Length

15 min presentation plus 5 min Q&A

Due Date

Week 13 - Please refer to Canvas announcement for the full presentation schedule

Submission Method

Specific Location

Please refer to Canvas announcement for the seminar location

Assessment Criteria

See rubrics on Canvas

Return Method

Not Returned

Feedback Provided

Online - Within 15 University working days after the seminar date. Written feedback provided by independent assessors will be communicated via email by the Course Coordinator

Assessment 3 - Research Notebook

Assessment Type Description

Log / Workbook

The purpose and benefit of the research notebook is to develop the record keeping skills that are the standard practice for conducting research in the discipline area. It serves as an immediate and comprehensive record of the work performed and provides evidence for the

Weighting	effort and application made towards the research project. 15%
Due Date	5pm, Monday 23 October 2023
Submission Method	Specific Location Submit to Project Supervisor
Assessment Criteria	See rubrics on Canvas
Return Method	In Person
Feedback Provided	Online - Within 15 University working days of submission. Written feedback provided by the Project Supervisor will be communicated via email by the Course Coordinator

Assessment 4 - Final Project Report

Assessment Type	Report
Description	The final project report addresses knowledge acquisition and demonstrated assimilation of data, upon reflection and analysis, to produce articulate and concise documents which convey evidence-based understanding of the concepts and topics. It develops skills in the synthesis and presentation of scientific research in a form that is ubiquitous in scientific research. Project results must be written up as a manuscript in a format acceptable for journal publication in the relevant field, even though it may not be actually submitted for publication. Students will choose a suitable journal in consultation with their supervisor, check and follow the requirements to authors.
Weighting	50%
Due Date	5pm, Monday 23 October 2023
Submission Method	Online Submit to Course Coordinator via email
Assessment Criteria	See rubrics on Canvas
Return Method	Online
Feedback Provided	Online - Within 15 University working days of submission. Written feedback provided by independent assessors will be communicated via email by the Course Coordinator

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).

Attendance	<p>Attendance/participation will be recorded in the following components:</p> <ul style="list-style-type: none">- Seminar (Method of recording: Taken manually using an attendance sheet) <p>A minimum 80% compulsory attendance is required. In approved circumstances, reasonable adjustments are made for those students who cannot meet the 80% attendance requirement.</p>
WH&S Requirements	<p>In order to participate in this course, students must (1) complete a compulsory local area/laboratory safety induction offered by their supervisor and (2) develop a project-specific risk assessment in consultation with their supervisor.</p>
Communication Methods	<p>Communication methods used in this course include:</p> <ul style="list-style-type: none">- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.- Email: Students will receive communications via their student email account.- Face to Face: Communication will be provided via face to face meetings or supervision.
Course Evaluation	<p>Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.</p>
Oral Interviews (Vivas)	<p>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.</p>
Academic Misconduct	<p>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.</p>
Adverse Circumstances	<p>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:</p> <ol style="list-style-type: none">1. the assessment item is a major assessment item; or2. 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;3. you are requesting a change of placement; or4. the course has a compulsory attendance requirement. <p>Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at: https://policies.newcastle.edu.au/document/view-current.php?id=236</p>
Important Policy Information	<p>The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at https://www.newcastle.edu.au/current-students/no-room-for/policies-and-procedures that support a safe and respectful environment at the University.</p>

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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