UNSW Course Outline

COMP9991 Research Project A - 2024

Published on the 25 Aug 2024

General Course Information

Course Code : COMP9991
Year : 2024
Term : Term 3
Teaching Period : T3
Is a multi-term course? : No
Faculty : Faculty of Engineering
Academic Unit : School of Computer Science and Engineering
Delivery Mode : Multimodal
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

Most students in MIT (8543) will complete the capstone course COMP9900 (MIT project) in their last term of studies, but students who by the end of their third to last session, have achieved a Distinction average (a WAM of at least 75) have the option to replace COMP9900 with

COMP9991 (Research Project A) in their penultimate term, to be followed by either COMP9992 (Research Project B) or COMP9993 (Research Project C) in their last term. Provided that the entry conditions are met, this option will be particularly appealing to students who intend to then start a research degree, either a Master by Research or a PhD. Meeting the expectations of COMP9991 + COMP9992 or COMP9991 + COMP9993, or even better, exceeding them with a piece of work that can result in a conference or journal publication, can make applications for a research degree stronger. The course will also be appealing to students who want to modestly improve on the state of the art in a particular discipline and be exposed to the various aspects of conducting research, working on a specific problem; it could be a problem they have identified themselves as it matters to them, or it could be a problem that is suggested by and discussed with the supervisor of the project.

Students who have completed (or have advanced standing in) at least 66UoC, intend to complete their degree in the next two terms, and are interested in this course, should contact potential supervisors, namely, CSE academics, write a project proposal following the guidelines of the COMP9991 course outline under the guidance of the supervisor, who will have to agree that the project appropriate, send the project description to the course authority who, if the application is accepted, with request the admin staff to manually enrol the student in COMP9991 (students cannot enrol themselves into the course).

Course Aims

The course is for high achievers who can and want to maximise the exposure to research that a Masters by coursework has to expose students to. It exceeds the aims of COMP9900 in doing more than "putting everything together": it aims at letting students tackle a genuine piece of research and improve on the state of the art, be it by making an algorithm more effective, or combining algorithms in new ways, or applying and adjusting particular techniques to new problems. Though projects can be purely theoretical, most projects will be applied at least to some extent and they will have an experimental component, thanks to which it is often possible to compare the proposed approach with existing ones.

By the end of the term, students must give a seminar, inviting at least supervisor and assessor, with a presentation that is roughly 30 minutes long, during which they review the topic, including current approaches, plan for future work, and demonstrate they have made some progress towards carrying out that plan. Whether COMP991 should be followed by COMP9992 or COMP9993, depending on how much work is expected to be needed to successfully conduct the research, is an important outcome of the seminar.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Understand all conceptual and technical aspects of the problem being investigated, and possibly the impact that solving the problem would have on society.
CLO2 : Apply existing methods to a problem for an in-depth understanding of how they work and of their limitations.
CLO3 : Analyse and compare various approaches and experimental results, to identify their key strengths and weaknesses.
CLO4 : Evaluate the potential benefits and chances of success of modified or new concept, techniques or designs.
CLO5 : Exchange ideas with a supervisor to boost creativity and develop critical thinking
CLO6 : Give an oral presentation that is as pedagogical, clear, technically precise and insightful as possible.

Course Learning Outcomes	Assessment Item
CLO1 : Understand all conceptual and technical aspects of the problem being investigated, and possibly the impact that solving the problem would have on society.	• First Term Seminar
CLO2 : Apply existing methods to a problem for an in-depth understanding of how they work and of their limitations.	• First Term Seminar
CLO3 : Analyse and compare various approaches and experimental results, to identify their key strengths and weaknesses.	• First Term Seminar
CLO4 : Evaluate the potential benefits and chances of success of modified or new concept, techniques or designs.	• First Term Seminar
CLO5 : Exchange ideas with a supervisor to boost creativity and develop critical thinking	• First Term Seminar
CLO6 : Give an oral presentation that is as pedagogical, clear, technically precise and insightful as possible.	• First Term Seminar

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
First Term Seminar Assessment Format: Individual	100%	

Assessment Details

First Term Seminar

Assessment Overview

A seminar should be held in week 11, between Monday 9am and Friday 6pm, at a day and time that is suitable to all. The student should organise it, either online or physically depending on the circumstances and what is possible or best for everyone at the time. The seminar will be attended by at least the supervisor and the assessor. It is strongly advisable to advertise the seminar to the research students in the School (via email sent to research-students@cse.unsw.edu.au) to

• give a chance to every PhD and Master by research student who is interested in the topic to find out more,

• make sure that maximal feedback is received,

• practice giving presentations to a larger audience.

Supervisor and assessor will not only provide feedback on the progress and plan, but also determine which of COMP9992 or COMP9993 is most appropriate in the following term, taking into account student wishes and administrative constraints. An EC grading scheme is used. A mark is awarded at the end of COMP9992 or COMP9993 (provided that supervisor and assessor agree that student can enrol in one or the other in the following term), and includes assessment of work done in both terms, including a mark for COMP9991. Still, students who do not provide an adequate plan for the project by the end of term will NOT be allowed to continue to COMP9992 or COMP9993 and must repeat COMP9991. Also, the Thesis Management System (TMS) will invite supervisor and assessor to provide feedback on the seminar, by awarding marks whose value is indicative only, and by providing comments using the following marking scheme, distributed over 3 criteria.

• Problem definition and state of the art (50%)

– FL (0-49%): The problem being tackled is ill-defined.

– PS (50-64%): The problem being tackled is well-defined but there is not enough knowledge or understanding of the techniques available to solve it, of their strengths and limitations.

– CR (65-74%): Good understanding of the problem and the gap in the state of the art that would be filled by addressing the problem successfully.

– DN (75-84%): Very good understanding of the problem, very good knowledge of the relevant literature.

– HD (85-100%): Excellent understanding of the problem and an in-depth knowledge of where

and why the best techniques known so far are limited.
• Achievements so far (30%)
– FL (0-49%): Nothing has been done besides studying the literature.
– PS (50-64%): Some preliminary results, possibly experimental but not necessarily, have been obtained thanks to which the problem is better understood.
– CR (65-74%): Some preliminary results, possibly experimental but not necessarily, represent the first steps towards a solution.
– DN (75-84%): Substantial results have been obtained that offer a partial solution to the problem.
– HD (85-100%): Thanks to the results that have been obtained, part of the problem can be considered as being fully solved.
• Plan for COMP9992 or COMP9993 (20%)

– FL (0-49%): Not much more clarity on how to approach the problem than when the project started.
– PS (50-64%): Understanding of how to approach the problem and with a high probability, obtain good results.
– CR (65-74%): Clear understanding of how to approach the problem in a structured manner and which milestones to aim for.
– DN (75-84%): Very good understanding of the work ahead, of the chances of success of the planned approaches, and of the outcomes that can reasonably be expected.
– HD (85-100%): Excellent proposal to structure the work ahead, with an in-depth appreciation of the chances of success of the various parts of the proposed work, with different paths to follow or not depending on progress to maximise the final achievements.

These marks are only provided as feedback, they are not “official”, they won’t appear on your transcript, they won’t be used in the computation of the mark that is eventually awarded to COMP9991. That computation will be performed when completing COMP9992 or COMP9993, with a mark awarded to COMP9992 or COMP9993 and (retrospectively) to COMP9991 as well.

Course Learning Outcomes

- CLO1 : Understand all conceptual and technical aspects of the problem being investigated, and possibly the impact that solving the problem would have on society.
- CLO2 : Apply existing methods to a problem for an in-depth understanding of how they work and of their limitations.
- CLO3 : Analyse and compare various approaches and experimental results, to identify their key strengths and weaknesses.
- CLO4 : Evaluate the potential benefits and chances of success of modified or new concept,

techniques or designs.
- CLO5 : Exchange ideas with a supervisor to boost creativity and develop critical thinking
- CLO6 : Give an oral presentation that is as pedagogical, clear, technically precise and insightful as possible.

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
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
	Eric Martin					Yes	Yes

Other Useful Information

Academic Information

I. Special consideration and supplementary assessment

If you have experienced an illness or misadventure beyond your control that will interfere with your assessment performance, you are eligible to apply for Special Consideration prior to, or within 3 working days of, submitting an assessment or sitting an exam.

Please note that UNSW has a Fit to Sit rule, which means that if you sit an exam, you are

declaring yourself fit enough to do so and cannot later apply for Special Consideration.

For details of applying for Special Consideration and conditions for the award of supplementary assessment, please see the information on UNSW's Special Consideration page.

II. Administrative matters and links

All students are expected to read and be familiar with UNSW guidelines and polices. In particular, students should be familiar with the following:

- Attendance
- UNSW Email Address
- Special Consideration
- Exams
- Approved Calculators
- Academic Honesty and Plagiarism
- Equitable Learning Services

III. Equity and diversity

Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course convener prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equitable Learning Services. Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.

IV. Professional Outcomes and Program Design

Students are able to review the relevant professional outcomes and program designs for their streams by going to the following link: https://www.unsw.edu.au/engineering/student-life/student-resources/program-design.

Note: This course outline sets out the description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published. Moodle or your primary learning management system (LMS) should be consulted for the up-to-date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline/Moodle/LMS, the description in the Course Outline/Moodle/LMS applies.

Academic Honesty and Plagarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. UNSW has produced a website with a wealth of resources to support students to understand and avoid plagiarism, visit: student.unsw.edu.au/plagiarism. The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one.

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis or contract cheating) even suspension from the university. The Student Misconduct Procedures are available here:

www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

Submission of Assessment Tasks

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of five percent (5%) of the maximum mark possible for that assessment item, per calendar day.

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day. This is for all assessments where a penalty applies.

Work submitted after five days (120 hours) will not be accepted and a mark of zero will be

awarded for that assessment item.

For some assessment items, a late penalty may not be appropriate. These will be clearly indicated in the course outline, and such assessments will receive a mark of zero if not completed by the specified date. Examples include:

- Weekly online tests or laboratory work worth a small proportion of the subject mark;
- Exams, peer feedback and team evaluation surveys;
- Online quizzes where answers are released to students on completion;
- Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date; and,
- Pass/Fail assessment tasks.

Faculty-specific Information

Engineering Student Support Services – The Nucleus - enrolment, progression checks, clash requests, course issues or program-related queries

Engineering Industrial Training – Industrial training questions

UNSW Study Abroad – study abroad student enquiries (for inbound students)

UNSW Exchange – student exchange enquiries (for inbound students)

UNSW Future Students – potential student enquiries e.g. admissions, fees, programs, credit transfer

Phone

(+61 2) 9385 8500 – Nucleus Student Hub

(+61 2) 9385 7661 – Engineering Industrial Training

(+61 2) 9385 3179 – UNSW Study Abroad and UNSW Exchange (for inbound students)

School Contact Information

CSE Help! - on the Ground Floor of K17

- For assistance with coursework assessments.

The Nucleus Student Hub - https://nucleus.unsw.edu.au/en/contact-us

- Course enrolment queries.

Grievance Officer - grievance-officer@cse.unsw.edu.au

- If the course convenor gives an inadequate response to a query or when the courses convenor does not respond to a query about assessment.

Student Reps - stureps@cse.unsw.edu.au

- If some aspect of a course needs urgent improvement. (e.g. Nobody responding to forum queries, cannot understand the lecturer)

You should **never** contact any of the following people directly:

- Vice Chancellor

- Pro-vice Chancellor Education (PVCE)

- Head of School

- CSE administrative staff

- CSE teaching support staff

They will simply bounce the email to one of the above, thereby creating an unnecessary level of indirection and a delay in the response.