

School of Computer Science and Engineering Education Committee Meeting

Minutes of the meeting held on Friday, 14 June 2024

PRESENT:	John Shepherd (Chair) Aditya Joshi Alan Blair Angela Finlayson Andrew Taylor Arcot Sowmya Armin Chitizadeh Basem Suleiman Chun Tung Chou Gustavo Batista Hammond Pearce Imran Razzak Jake Renzella Katie Clinch Michael Bain Michael Thielscher	Mohsen Kakavand Oliver Diessel Paul Hunter Raymond Louie Raymond Wong Raveen de Silva Salil Kanhere Sasha Vassar Sebastian Sequoiah-Grayson Shikha Mishra Sonit Singh Sushmita Ruj Tina Tuomikoski Wayne Wobcke Yuchao Jiang Yuekang Li
APOLOGIES:	Sara Ballouz Eric Martin Fethi Rabhi	
IN ATTENDANCE:	Sebastianus Kandi Shiling Wu Victoria Jenkins (Secretary)	

1. OPENING OF MEETING

The Chair opened the meeting at 12:00 pm.

2. CONFIRMATION OF MINUTES

The minutes of the previous meeting held on 24 April 2024 were confirmed with the following amendments:

- Correction to item 5.3C: The comment on Faculty APC was made by John Shepherd, not by Wayne Wobcke.
- Reassignment of an action item 19: from Arcot Sowmya. The final details are noted in Section 3.

3. REVIEW OF ACTION SHEET

Item 17: New Equipment – Item Closed

Oliver Diessel to request budget approval for the purchase of new boards for use in COMP3222/9222.

Item 19: Masters Curriculum AQF Level 9

Reassign the task related to the Masters curriculum AQF Level 9 criteria to Eric Martin.

Item 20: AQF Levels and Advanced Disciplinary Knowledge (ADK) Courses

John Shepherd discussed the Australian Qualifications Framework (AQF) levels and their impact on course code approvals, referencing the recent challenges faced during the approval of the Cyber Security degree. The Committee reviewed the list of ADK courses, addressing the Faculty's concern about whether certain courses meet AQF Level 9 requirements. John Shepherd and Eric Martin had previously evaluated and removed some

courses that did not meet the criteria, as they were advanced courses primarily based on textbook material, whereas the ADK designation requires research-level content.

The Faculty doubted that COMP4*** advanced undergraduate courses could meet AQF Level 9 requirements, but John Shepherd argued that some COMP4*** courses do meet the criteria. Additionally, an advanced postgraduate course, COMP9***, was claimed by a lecturer to be AQF Level 10, which was seen as contentious by the Faculty.

4. ITEMS FOR DECISION

4.1. Small Courses and Workload

Andrew Taylor reviewed all courses with offerings under 100 students in 2024 to determine whether they should be offered in 2025 or rested. He suggested that five courses should not be offered in 2025 and identified a few others that should be offered if possible. He provided a list with his recommendations and invited further input from the Committee. It was noted that offering less popular later-year electives every second year could increase enrolment by giving students more flexibility in their course selection. The cohort size for 2024 is projected to be around 5000 new students and highlighted that offering the Computer Vision Course as an elective three times a year could result in over 700 students per offering in 2025.

Arcot Sowmya clarified that the GSOE course is owned by the Faculty and not the school, and was created initially by the Faculty. The course was originally taught by lecturers from the Founders program, which focuses on startups. The Founders program still offers courses related to launching startups, and MIT students can take these as electives. The Business Faculty also offers courses similar to these, that MIT students can also take as electives. It was also noted that the course currently has around 70 students per term, running three times a year, which requires significant effort to run for a relatively small number of students.

The Committee mentioned that in-person delivery might be a much better experience than online for some courses. It was noted that enrolment trends from 2020 to 2023 might reflect this, as students who started online courses did not finish them because they did not suit their needs. A note was made that the intakes in 2018 and 2019 were much lower and that 2019 was the first year of trimesters, making it difficult to use those years as a normal reference.

Additionally, the Committee questioned the future of small and online courses, specifically those under the UNSW Online program. These must be retained for the time being due to contractual obligations. Clarification was provided that while non-core small courses might be considered for cancellation, core courses for programs like BINF will not be cancelled.

Resolution:

The Committee will formally vote on small courses at the future Education Committee Meeting on 19 July following consultation.

Document Reference: [Courses with less than 100 enrolments/offering in 2024](#)

4.2. Changes to MIT Specialisations

Following a conversation with Eric Martin, John Shepherd provided an update in which they agreed to disestablish the Data Science specialisation in MIT and add a new Software Engineering specialisation.

Resolution:

A proposal will be created in ECLIPS. The Committee was asked to review the proposal and provide feedback.

5. ITEMS FOR DISCUSSION

5.1. Exams and Special Considerations

John Shepherd presented the number of Special Consideration applications from Term 1, 2019 to Term 1, 2024, noting a significant increase in Term 1, 2024, particularly for final and supplementary exams.

Shiling Wu, Teaching Support Officer, provided an overview of supplementary exams, highlighting that O Week is the busiest time due to administrative tasks. 640 students were offered supplementary exams, with 396 in the



CSE lab, 166 in Moodle, Inspira, or in-person settings, and 85 potential graduates offered mercy supps. About 30% of students did not attend their supplementary exams.

Second supp exams were moved from Saturday to Monday, causing some confusion. It was suggested that the official exam schedule be followed to prevent such issues. Due to increasing enrolments, some courses might need to adhere to central exam guidelines for second supplementary exams in the future. On the other hand, the official second supp day is Saturday which means that (a) UNSW Health Services is not open on weekends, affecting students needing immediate medical assistance, (b) CSG are not available to provide fast technical support in the event of server problems.

John Shepherd and Janelle Heron noted that some students showed up than were on the supp list, but there was enough space to accommodate them. However, Janelle and the Teaching Support Officers elaborated on the issues faced with the high number of special considerations and supplementary exams in Term 1, highlighting the administrative burden and potential capacity issues.

Shiling Wu highlighted the UNSW Assessment Implementation Policy, focusing on supplementary assessment procedures. These procedures allow for a further supplementary exam no more than two weeks after the scheduled exam.

Andrew Taylor raised the need for auditing students in other Schools to access course materials and centrally run exams, questioning if there is a deadline for enrolling students as auditing students. He also noted challenges in managing increasing enrolments and the potential need to fully utilise all labs.

It was noted that during a past discussion in the DEMC, a final exam (invigilated or otherwise) is not a requirement for accreditation within Engineers Australia's guidelines.

Resolution:

All exam-related and marking matters should be handled through cse.teaching@unsw.edu.au at the end of every term to ensure proper clean-up of any issues.

Action Items:

- a. The Committee will continue discussions on the necessity of following central exam guidelines for second supplementary exams due to increasing student enrolments.
- b. *Clarification is needed regarding whether there is a University Policy specifying a deadline within a given term for when an audit can be approved.*
- c. *John Shepherd will raise the Committee's concerns further with Jayashri and provide an update to the Committee.*

Document Reference: [UNSW Assessment Implementation Policy](#)

5.2. New Course: Engineering of Machine Learning Systems

Jake Renzella proposed a Machine Learning Engineering course, differentiating it from general Machine Learning courses by focusing on Software Engineering aspects surrounding Machine Learning Models. The course would include topics such as monitoring and maintaining long-running Machine Learning Models in production systems and integration into software engineering systems, covering long-term deployment and monitoring. It was noted that making the course highly specialised with prerequisites such as COMP1531 and COMP3411 might make it less accessible to students from other engineering disciplines.

The Committee expressed concerns about the course design, questioning whether the course should be generic for all engineering students with minimal prerequisites or highly specialised for computer science students aiming for careers at top tech companies like Canva or Google. Additionally, there was potential for overlap with existing Machine Learning and Data Science courses. It was noted that introductory parts of the proposed course are usually covered by Data Science courses, with the unique aspect being cloud deployment and operation. The importance of understanding the pre-requisite chain to avoid overlap and ensure the course content is distinct and valuable for students with prior AI knowledge was emphasised. The prerequisites for the course should include both Software Engineering and Machine Learning to enable effective deployment of AI models from week four onwards.



Action Items:

- a. Jake Renzella to adjust the syllabus for week three to refer to "Predictive and Generative Models" to ensure it includes common machine learning goals such as clustering, regression models, and new models like logic language models, as suggested by Gustavo Batista.
- b. Jake Renzella will follow up with Basem Suleiman regarding collaboration opportunities related to cloud resources for deploying and monitoring machine learning models, leveraging existing research and partnerships with industry, and exploring the potential development of a course on these topics. Jake will send a message to Basem to arrange a meeting for further discussion
- c. Review and provide feedback on the proposed course syllabus to ensure it addresses the concerns and suggestions raised.
- d. Discuss and determine the course's appropriate prerequisites and AQF level to balance accessibility and specialisation.
- e. Prepare and submit the course proposal in ECLIPS for further review.

Document Reference: [Preliminary Course Proposal](#)

5.3. Maths in the CSE Curriculum

The Committee will discuss Maths in the CSE Curriculum in a future Education Committee meeting, and a preview overview was provided on Raveen De Silva's behalf. John Shepherd highlighted that a significant portion of the content from Maths 1A and Maths 1B is necessary for more advanced computer science courses. He suggested identifying which parts of these courses are essential and considering the creation of a bespoke math course for computer science students to eliminate the need for taking both Maths 1A and Maths 1B. Committee members were asked to reflect on the math content required for their courses, especially for third-year, fourth-year, and AQF Level 9 courses, to enable a more comprehensive discussion in the next meeting. The topic will be revisited in the next meeting, incorporating members' feedback.

Action Item:

Committee members were asked to reflect on the math content required for their courses, especially for third-year, fourth-year, and AQF Level 9 courses, to enable a more comprehensive discussion in the next meeting.

5.4. AI Teaching Group

Wayne Wobcke reported on the formation of the AI Teaching group. Provided updates on course offerings and faculty assignments for the AI courses.

- COMP9417 (Machine Learning): An additional offering is proposed for Term 3. Gustavo is available to teach.
- COMP9444 (Neural Networks and Deep Learning): Raymond Louie and Sonit will share this course across two terms (T1 & T3), while Imran and Alan will cover it in Term 2.

5.5. COMP9517 Computer Vision Courses:

Lecturers were hesitant to offer three sessions of computer vision due to high enrolment numbers (800 in Term 2). There are currently no instructors assigned for computer vision in Term 1.

A subcommittee consisting of Mike, Gelareh and Gustavo, the machine learning lecturers, has been formed to align the introductory machine learning course (COMP9417) and the advanced machine learning course (COMP9418).

The aim is to revise the advanced machine learning course and standardize assessments across the three terms for the introductory machine learning course to clearly differentiate between introductory and advanced levels. It was mentioned that when considering adding additional course offerings in different terms, it is important to consider the availability of course convenors and administrators, as some courses typically use the same staff for all offerings. This may affect the feasibility of offering certain courses more frequently.

6. ITEMS FOR NOTING AND INFORMATION**6.1. Report(s) from Committees outside CSE**

John Shepherd reported on the APC meeting, noting that the APC approved the cybersecurity program but required all course codes to be changed from COMP6XXX to COMP3XXX to clarify the AQF level. Despite his dissatisfaction with the APC's course code guidelines, the changes were made as requested.



6.2. Report on UNSW Online

Rahat Masood provided an update on UNSW Online's proposed changes to simplify the admission process and entry requirements for most engineering programs, particularly the online Cyber Security program. The key changes proposed are as follows:

- a. For applicants without a bachelor's degree, particularly for the Graduate Certificate, the current requirement of two years of relevant experience in fields such as cyber security, analytics, or business is difficult to assess based on CVs. It is proposed to simplify this by accepting experience in computer science, engineering, or computer software engineering roles, with an internal evaluation of specific roles like cyber security engineer or risk manager. These roles will not be published externally.
- b. The removal of the WAM (Weighted Average Mark) requirement of 65% for the Graduate Certificate. This change aims to allow admission for students with significant professional experience who may not meet the current academic threshold.

These changes will be taken to the Education Committee for discussion and pursued for possible approval. The Committee raised concerns about the consistency of entry requirements across all master's Programs, including the upcoming Master of Cyber Security. Currently, the entry requirement for MIT is 65, which is considered low, and there has been a past request to increase it to 70, but no further action has been taken, and whether the proposed concession aligns with the MIT Graduate Certificate standards. An emphasis of maintaining consistent entry requirements, whether the programs are online or not, and suggested that the Committee consider raising the requirements to ensure high standards.

Action Items:

- a) Rahat Masood will consult with Andrew, John, Wayne, and Arcot if immediate action is needed and will provide the proposal documentation to the mentioned Committee members.
- b) With consultation from Eric Martin, Rahat Masood will check current practices for the MIT program and ensure any proposed changes to the Cybersecurity Program are consistent.

6.3. Report on Workload Committee/Formula

Wayne Wobcke presented an update on the workload formula, mentioning ongoing email discussions and general agreement on the fundamentals within the Committee. The discussion highlighted the need for special adjustments to the formula for large and very large courses, which require more administration. It was noted that first-year courses such as COMP1511, COMP1521, COMP1531, and core postgraduate courses like COMP9020 and COMP9024 have very high enrolment numbers, necessitating additional administrative efforts. Emphasis was placed on the fact that teaching a very large course in one term could amount to more than 35 hours per week, as seen in courses like COMP1511 and COMP3231.

The need for splitting or sharing large courses and the creation of teaching clusters to manage workload effectively was mentioned. It was pointed out that the current average teaching load is about 32%, with some staff members doing less teaching due to administrative responsibilities.

There is a reliance on casuals for teaching, which needs to be addressed due to concerns about workload distribution. The need to reassess supervision capacity for undergraduate and postgraduate thesis students, especially with the introduction of advanced computer science students, was highlighted. To meet the current teaching demands, the school requires approximately 91 staff members. However, with only 73 available staff members, there is a significant shortfall, leading to an over-reliance on casuals.

It was noted that Wenjie has agreed to help with the allocation of database courses, which may be needed more frequently.

There is also a gap that needs to be addressed by the software engineering cluster, especially in project management.

Suggestions were made to refer to an example where a 12-month contract was offered for ongoing assistance in COMP1511, highlighting the need to decide between casual versus fixed-term contracts. This decision is influenced by considerations such as HR policies, legislation, and the school's historical reliance on casual staff due to past economic downturns, which led to job losses. The ongoing challenge is to balance these factors and seek the best advice from HR and legal guidance.



Action Item:

a) Wayne Wobcke will establish and clarify teaching clusters to better manage the allocation of courses and workload, address the need for more staff in areas with large courses, and reevaluate the cap on undergraduate thesis supervision to accommodate future demand.

7. ANY OTHER BUSINESS

7.1. Course Offering for COMP9517

The members discussed concerns about the inability to offer COMP9517 in Term 1, 2025, highlighting a potential shortfall in courses for postgraduate students. It was noted that there was a significant intake of postgraduate students in Term 1 of the current year, and these students will need courses available in Term 1, 2025. It was suggested that if COMP9517 can only be offered twice a year, it would be preferable to schedule it in Terms 1 and 2 in 2025 to accommodate the high intake.

Action Item:

The Committee confirmed that Wayne Wobcke would follow up with Faculty members to ensure appropriate scheduling and explore alternatives if needed.

7.2. Accreditation for COMP4920

A meeting is scheduled with ACS to determine the necessary topics for a masters-level Ethics of Computer Science course to ensure accreditation. The plan is to integrate these topics into COMP4920 with a new course code for master’s students, including a different assessment structure. This course is expected to be ready by Term 1, 2025, and will be available as a core course, essential for accreditation. It was noted that adding a new core course is a complex and potentially lengthy process, possibly too late for immediate implementation.

7.3. Increased Applications for Term 1 2025

Arcot Sowmya provided an update following a meeting with DMC, which reported that applications for Term 1 2025 have increased by 51%, highlighting the potential for higher admissions numbers unless a cap is placed on admissions. The current equivalent full-time load for the Computer Science and Engineering program is around 7000. A question was raised regarding whether the 51% increase in applications was across the board or separated by undergraduate and postgraduate levels.

Action Items:

- a. Arcot Sowmya is to provide detailed breakdowns of the application increases for undergraduate and postgraduate programs after the meeting.
- b. The Committee will need to consider potential impacts on admissions and capacity.

7.4. Future Meetings

Future meeting dates and agenda items were noted for confirmation, focusing on course revisions and project management integration.

Day	Date	Time	Location
Friday	19-Jul	12 – 2 pm	TBA
Friday	7-Aug	12 – 2 pm	TBA
Friday	13-Sep	12 – 2 pm	TBA
Friday	11-Oct	12 – 2 pm	TBA
Wednesday	20-Nov	12 – 2 pm	TBA

The meeting was closed at 1:41 pm.

DR JOHN SHEPHERD
Chair

