

# myExperience Report

Term 3, 2024

Faculty: Faculty of Engineering		
School: School of Computer Sci & Eng		
Course: COMP9242 Advanced Operating Systems		
Evaluation period: Nov 4 2024 12:00AM - Nov 21 2024 12:00AM		

#### **Course Report**

#### **Response Data**

Raters	Student
Responded	17
Invited	43
Response Ratio	39.5%

# Comparison of results for "Overall I was satisfied with the quality of the course"

#### This course: COMP9242 Advanced Operating Systems

Overall I was satisfied with the quality of the course				
Options	Count	Percentage	Statistics	Value
Strongly disagree	0	0.0%	Mean	5.94
Disagree	0	0.0%	Median	6.00
Moderately disagree	0	0.0%	Standard Deviation	0.24
Moderately agree	0	0.0%	Standard Error (base on SD)	0.06
Agree	1	5.9%	% Agree broad	100.0%
Strongly agree	16	94.1%		

#### SCHOOL: School of Computer Sci & Eng

Overall I was satisfied with the quality	of the course		
Options	Percentage	Statistics	Value
Strongly disagree	2.6%	Mean	4.98
Disagree	2.8%	Median	5.00
Moderately disagree	4.6%	Standard Deviation	1.18
Moderately agree	14.7%	Standard Error (base on SD)	0.01
Agree	34.6%	% Agree broad	90.0%
Strongly agree	40.8%		

#### FACULTY: Faculty of Engineering

Overall I was satisfied with the quality	of the course		
Options	Percentage	Statistics	Value
Strongly disagree	2.5%	Mean	5.05
Disagree	2.6%	Median	5.00
Moderately disagree	4.1%	Standard Deviation	1.17
Moderately agree	13.3%	Standard Error (base on SD)	0.01
Agree	33.4%	% Agree broad	90.8%
Strongly agree	44.1%		

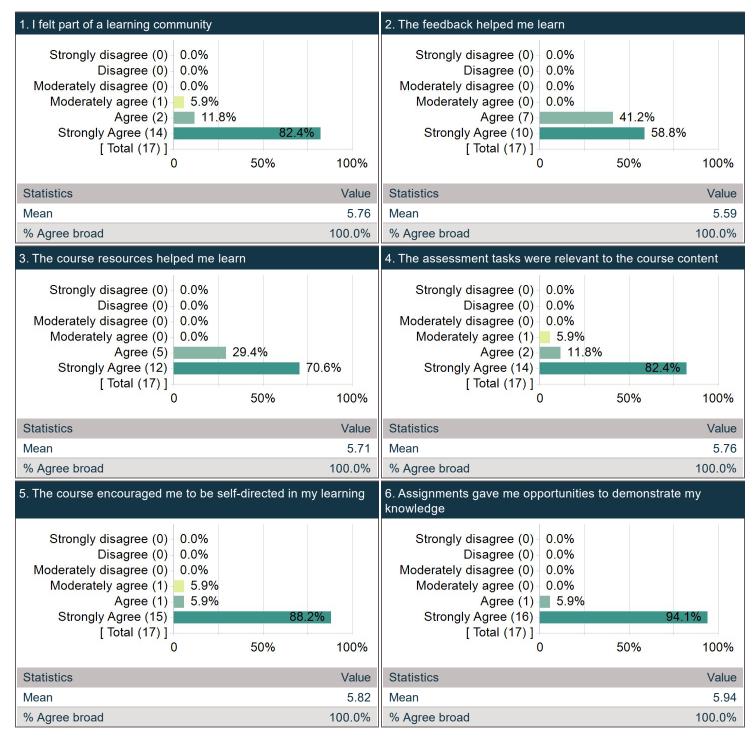
#### Overall I was satisfied with the quality of the course

Overall I was satisfied with the	e quality of the course			
Strongly disagree (0) Disagree (0) Moderately disagree (0) Moderately agree (0) Agree (1) Strongly agree (16) [Total (17)]	0.0% 0.0% 0.0% 5.9%	50	0%	94.1%
Statistics				Value
Mean				5.94
% Agree broad				100.0%

The table below shows the percentage of 'Agree' and 'Strongly agree' responses to the question 'Overall I was satisfied with the quality of the course'

Overall I was satisfied with the quality of the course	
Statistics	Value
% Agree	100.0%

2024 Term 3 Course Report: COMP9242 Advanced Operating Systems



#### **Comparison Statistics**

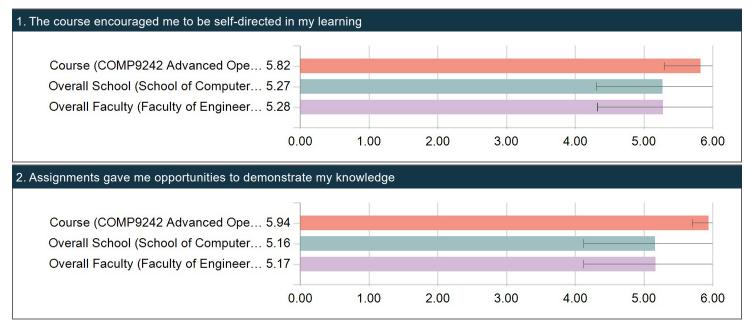
Mean (average student responses between 1 and 6) and StandardDev (Standard deviation of student responses) are used for comparison statistics between Course, School, Faculty and University.



2024 Term 3 Course Report: COMP9242 Advanced Operating Systems



## Faculty of Engineering specific questions



### Raw Comment Data

#### What were the best things about this course?

#### Comments Trial by fire. Unlike any other course Literally everything I appreciate this course a lot. Definitely the best course I've taken at UNSW. Having the chance to know from Gernot and Kevin that the experience for designing and constructing a state-of-the-art microkernel operating system. A lots of practicing on building a userspace OS. Definitely the best computer science course at UNSW. It's fun to write most of a project yourself, and to get to make some design decisions and feel the consequences. Running the project as a pair worked very well for me, it helped to talk over the design. We didn't end up splitting much of the work, it was mostly pair programming. The help sessions were really good for similar reason, it was very helpful to get feedback on the design. Looking back, I wish I had used them more. seL4 is cool! I'm glad to have learned about it. Extremely interesting and challenging project; lectures were interesting, on-topic and well-delivered; Ed forum was helpful and questions generally answered much more quickly than I expected. Lab demos also generally helpful; getting showstopped was somewhat soul-crushing but no way around that. I liked having the sessions run daily at scheduled times and having the freedom to attend any session that worked for my partner (also the freedom to get marked off at a session later in the week if we had issues). In-depth background on the content. The projects are very challenging. Very interesting content and project, and enjoyed the amount of freedom in designing the system Lectures cover a variety of topics to a good depth, and cover super interesting topics.

Project was interesting, but personally enjoyes thw variety of lecture topics more.

Everything, even the hard sleepless nights before a deadline, no better feeling then working hard and it working

You will truly never get to experience a more punishingly rewarding course if this niche subject is what you're into.

Perfect course, I love it. Major shout to the incredible knowledge to be learnt and i thoroughly enjoyed being given such a large project to tackle.

#### What could be improved?

#### Comments

More/longer lab sessions. Lab sessions were pretty much exclusively for getting things marked off, without any time to discuss and explore ideas with tutors.

Not sure if this would be valid but a video walkthrough of the milestone like in the regular OS course would be helpful.

The course content isn't that relavant to what we are aiming to do for the milestones.

Consultations need to be longer, tutors are often busy marking milestones and it is difficult to get support / ask questions for problems. This was a big problem at the start of the term especially.

A draft for final report should be due on week 7 or something should forcefully remind students to begin report writing alongside the milestones instead of the final milestone, because students underestimate the time commitment a good report takes (myself included).

Milestone 7 can be more lenient on the late penalty since it is the end of the project, no extra work is due after.

Implementing a standard POSIX interface is a bit sad, especially for process creation and PID management (the interface is fundamentally broken). It would be more satisfying if we had to implement a system where PIDs were capabilities (I don't think anything is preventing us from doing that right now, but I thought of it too late, I would've liked it to be suggested).

Ate all of my time; I was getting a bit sick of it towards the end. I guess that was expected though.

Comparisons to alternative operating system designs.

Codebase questions:

Noticed that students often assumed that unintended issues in the codebase were simply difficulties they need to overcome on their own, rather than issues to flag to staff so they can be fixed and/or other students can be notified of them. It would be good if expectations were established at the beginning of term around this, and would help with the forum being under–utilised.

#### Local setup:

Some M0 explanations/resources were rather unclear about how to work with the odroids locally, and the container obtained by following the seL4 build dependencies instructions deviates slightly from the setup provided by `9242` on CSE machines (specifically, `9242`'s version of `gcc` is newer, which lead to some inconsistencies in the presence of compilation errors between my partner and myself).

As the project is entirely based around sel4, it would have been nice to spend the first week (like m0) on learning how to interact with sel4. The project was potentially harder than it needed to be as we were fighting sel4 all the way up to m6 as we, in hindsight, were hacking our way through the weeks with very scuffed sel4 usage as we never built a strong foundational understanding of sel4.

More lab demos in some labs

Sometimes the spec was a little vague, perhaps if there were not hidden showstoppers I could feel really prepared and confident. I understand that all showstoppers are simply bad design, but consultations are already a little bit of a stress since you can miss out on marking due to the short time frames. That and re–submission incurring massive penalties if you need to get marked later in the week. If show stoppers were transparent I would feel more encouraged.