myExperience Report

Term 3, 2023

Faculty: Faculty of Engineering

School: School of Computer Sci & Eng

Course: COMP9242 Advanced Operating Systems

Evaluation period: Nov 6 2023 12:00AM - Nov 23 2023 12:00AM

Course Report

Response Data

Raters	Student
Responded	18
Invited	37
Response Ratio	48.6%

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	1	5.6%	Mean	5.39
Disagree	0	0.0%	Median	6.00
Moderately disagree	0	0.0%	Standard Deviation	1.24
Moderately agree	1	5.6%	Standard Error (base on SD)	0.29
Agree	4	22.2%	% Agree broad	94.4%
Strongly agree	12	66.7%		

SCHOOL: School of Computer Sci & Eng

Overall I was satisfied with the quality of the course			
Options	Percentage	Statistics	Value
Strongly disagree	2.8%	Mean	4.88
Disagree	3.3%	Median	5.00
Moderately disagree	4.9%	Standard Deviation	1.20
Moderately agree	16.8%	Standard Error (base on SD)	0.01
Agree	36.2%	% Agree broad	89.0%
Strongly agree	36.0%		

FACULTY: Faculty of Engineering

Overall I was satisfied with the quality of the course			
Options	Percentage	Statistics	Value
Strongly disagree	3.0%	Mean	4.93
Disagree	3.2%	Median	5.00
Moderately disagree	4.6%	Standard Deviation	1.22
Moderately agree	15.4%	Standard Error (base on SD)	0.01
Agree	35.0%	% Agree broad	89.2%
Strongly agree	38.9%		

Overall I was satisfied with the quality of the course

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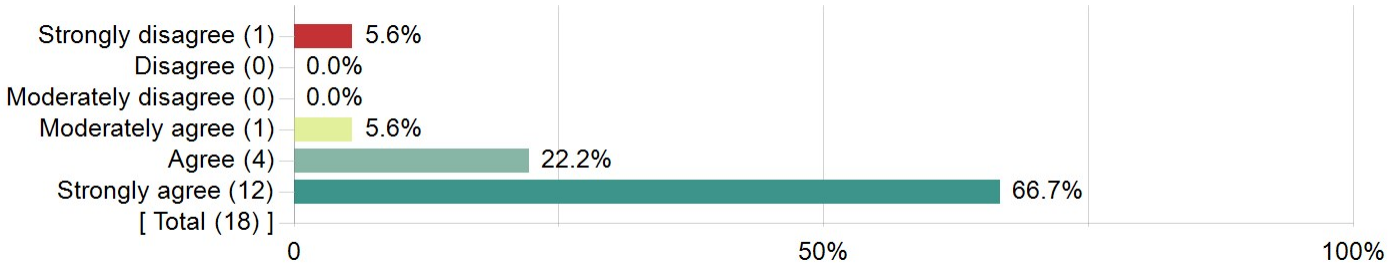


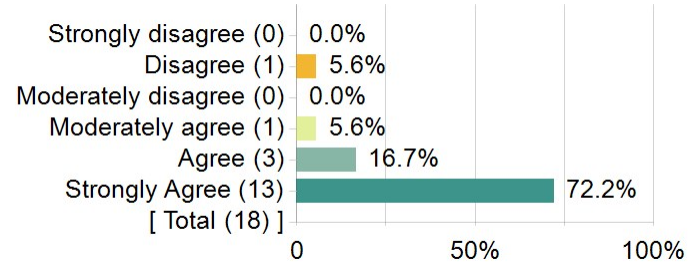
Statistics	Value
Mean	5.39
% Agree broad	94.4%

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

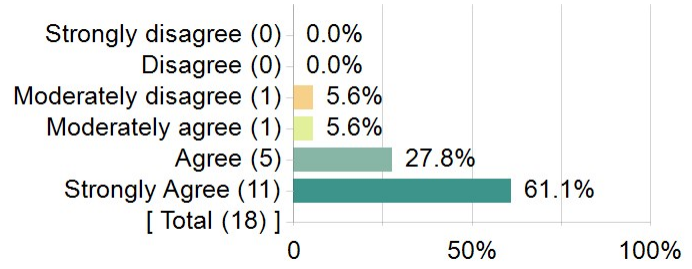
Statistics	Value
% Agree	88.9%

1. I felt part of a learning community



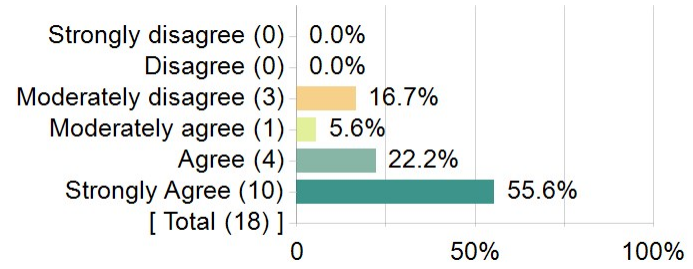
Statistics	Value
Mean	5.50
% Agree broad	94.4%

2. The feedback helped me learn



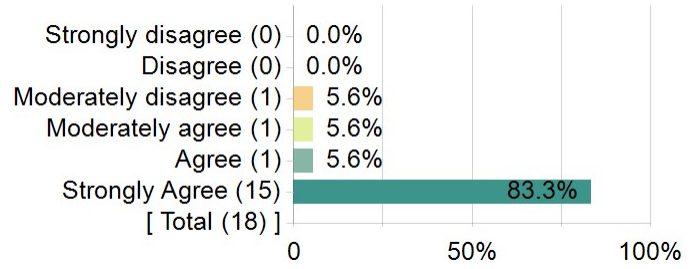
Statistics	Value
Mean	5.44
% Agree broad	94.4%

3. The course resources helped me learn



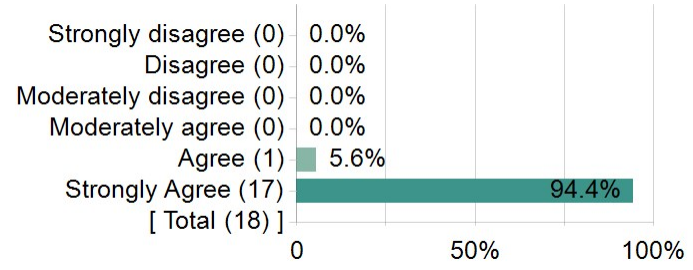
Statistics	Value
Mean	5.17
% Agree broad	83.3%

4. The assessment tasks were relevant to the course content



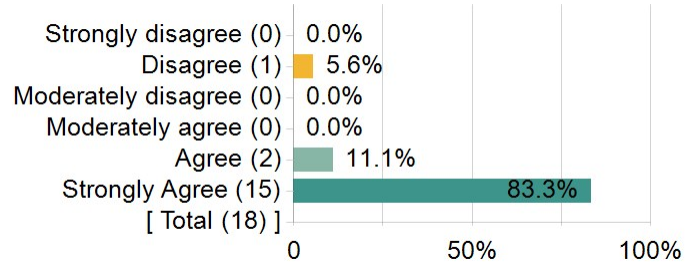
Statistics	Value
Mean	5.67
% Agree broad	94.4%

5. The course encouraged me to be self-directed in my learning



Statistics	Value
Mean	5.94
% Agree broad	100.0%

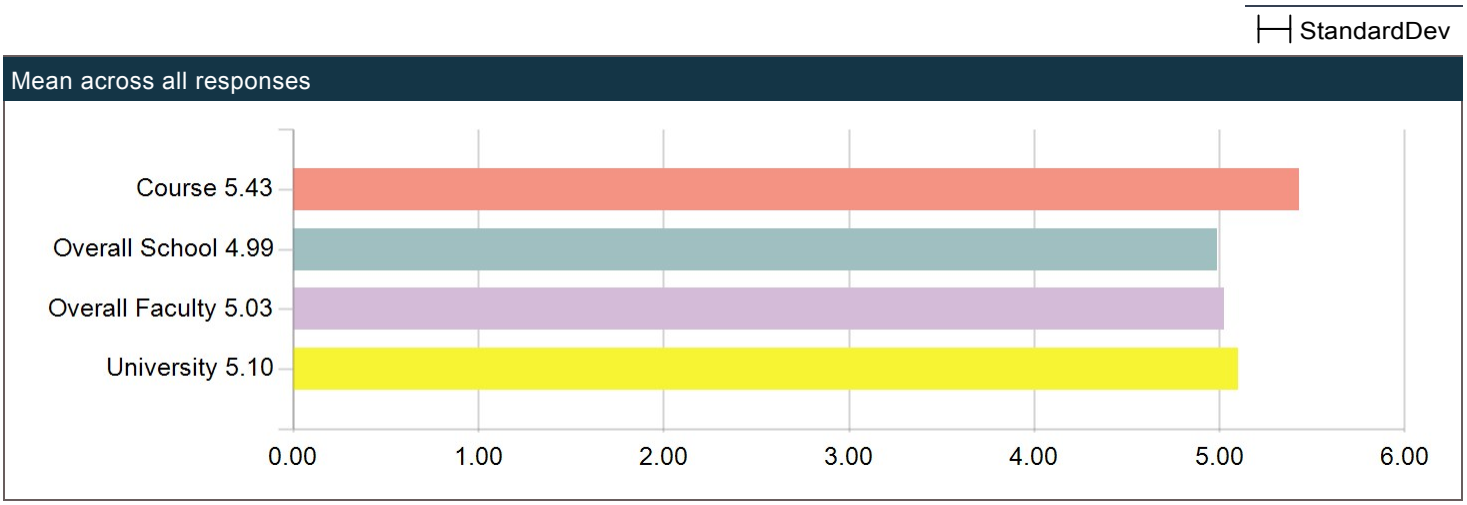
6. Assignments gave me opportunities to demonstrate my knowledge

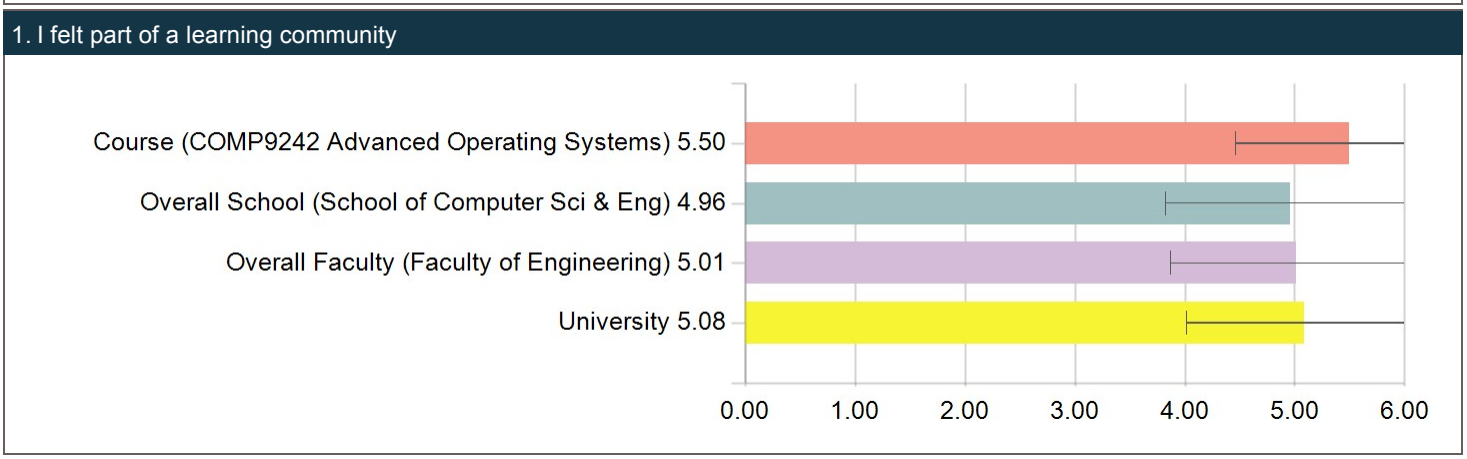


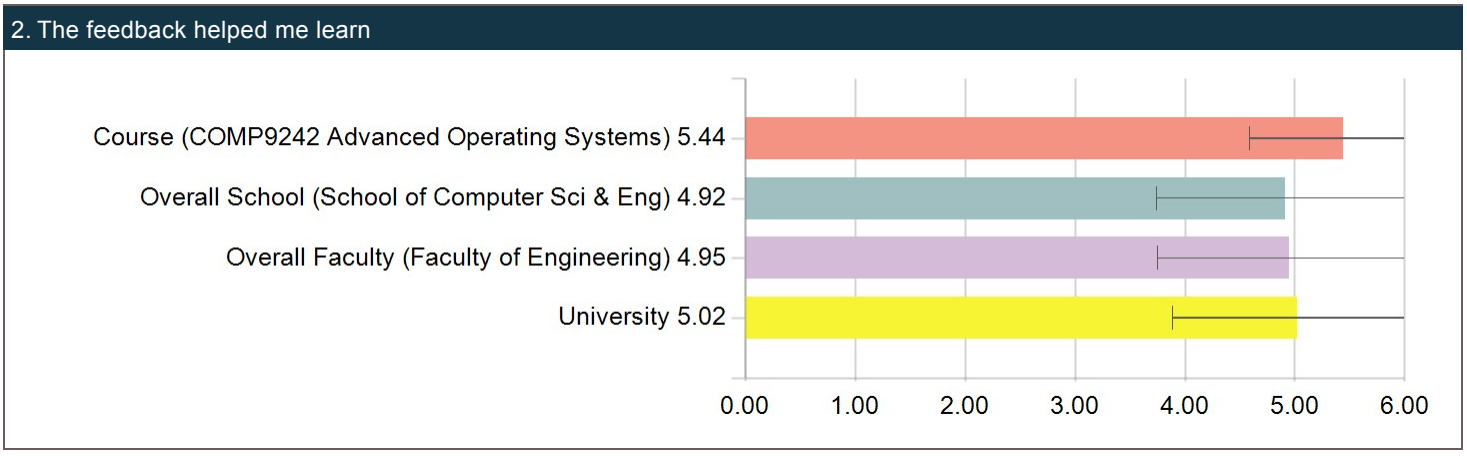
Statistics	Value
Mean	5.67
% Agree broad	94.4%

Comparison Statistics

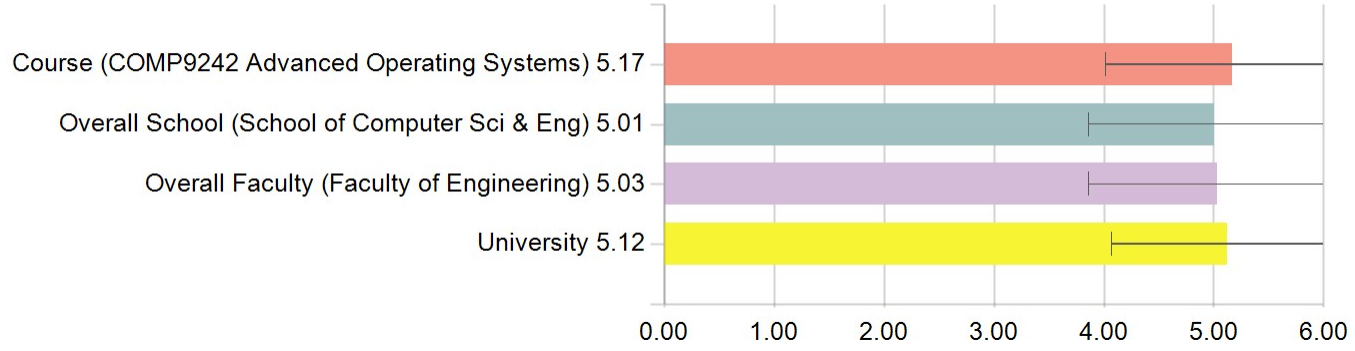
Mean (average student responses between 1 and 6) and StandardDev (Standard deviation of student responses) are used for comparison statistics between Course, School, Faculty and University.



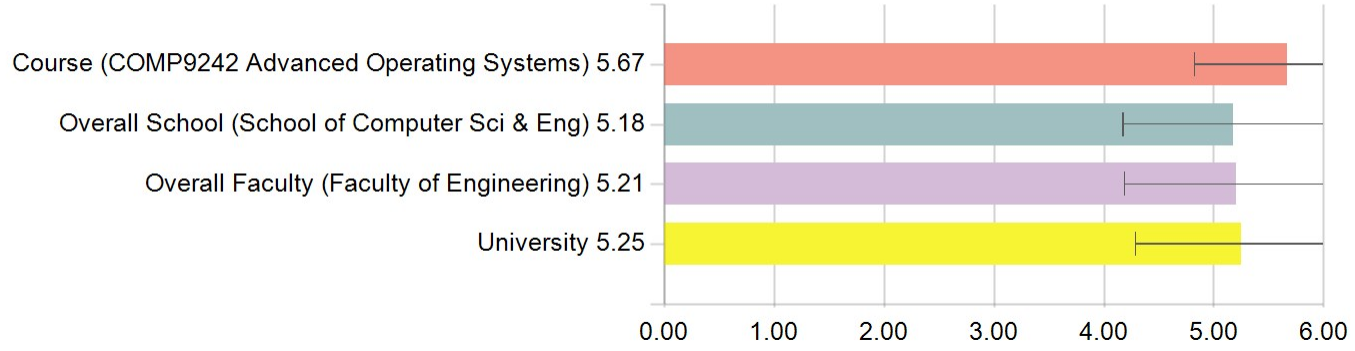




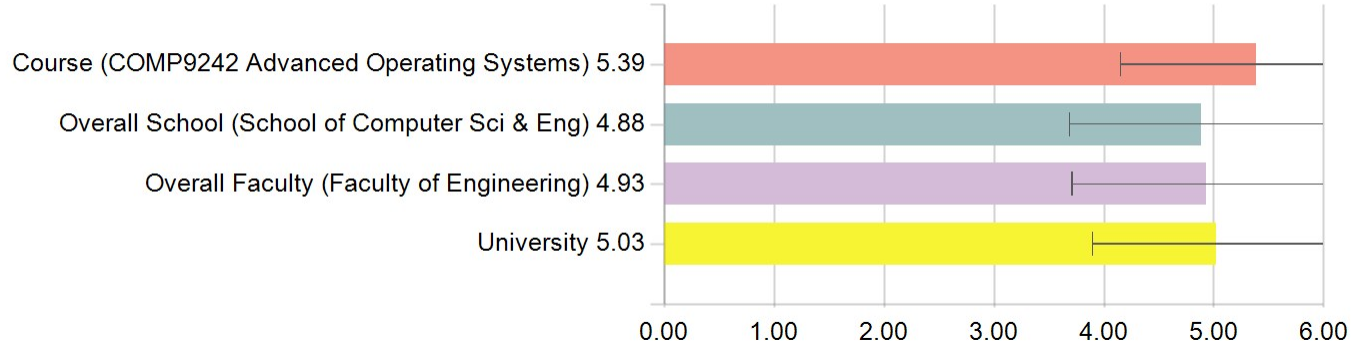
3. The course resources helped me learn



4. The assessment tasks were relevant to the course content

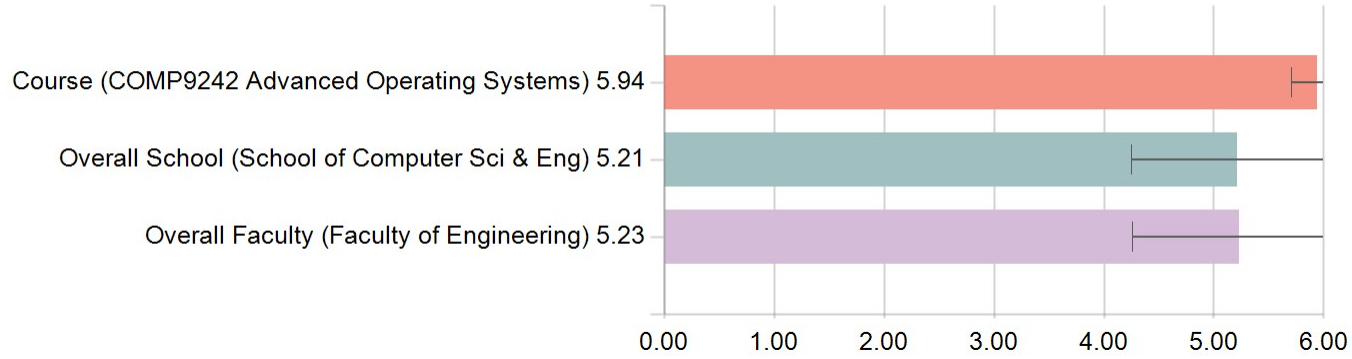


5. Overall I was satisfied with the quality of the course

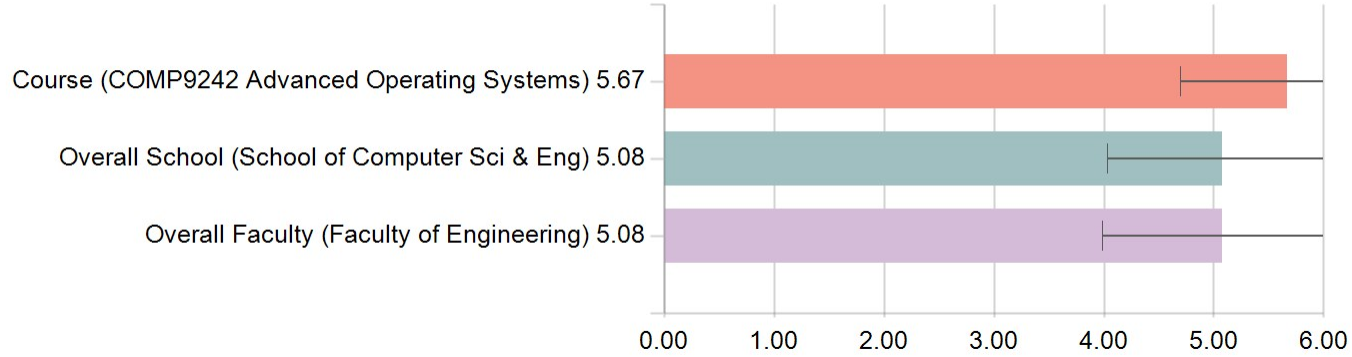


Faculty of Engineering specific questions

1. The course encouraged me to be self-directed in my learning



2. Assignments gave me opportunities to demonstrate my knowledge



Raw Comment Data

What were the best things about this course?

Comments
Super interesting lectures, challenging but fair project, great sense of shared suffering :)
Very challenging but satisfying course. The lecturers were well knowledgable and felt like one of the more premium courses UNSW has to offer.
Self directed learning & complex course content
– The freedom to do the project however you liked was great because it allowed me to really focus on system design for a uni course. – Lecture topics and delivery was fantastic. I especially enjoyed Ihor's set of lectures. – Most of the lab demonstrators were very knowledgeable and helped with blockers doe the project. – This is the first course I've done as an undergraduate that felt like it was really pushing me to my limits. Very rewarding experience overall.
– Interesting and fun project and lectures – Nice balance having the project for practical experience and lecture content for fun theory that is a bit hard to implement – Force us to spread the work out over the term – Generous late penalties
The lectures we're very interesting and the guest lecturers were phenomenal. Engaging with and writing real operating systems code is very useful experience.
One learns alot
Fantastic course, one of my favorite I've taken in my university degree. The project was very challenging and a lot of fun. I liked the close–knit nature of the learning community with everyone all working on the project together. There was a good level of guidance on the project which gave us a starting point while providing lots of flexibility. I thought the weekly milestones worked really well.
Interesting lectures Assignment was (mostly) fun to work on. Learned a lot about what to (and especially what not to do) when writing systems code Late penalty not applying on weekends! This is great
Both the project and the lectures were super interesting.
The project! It taught me so much about operating systems in a way that theoretical–based learning never could. Being able to actually apply concepts to practice is priceless.
The project is honestly perfect. It killed me, but it's perfect. Such relatively simple specs end up taking us down many different rabbit holes of learning and understanding, I'm not sure how that's possible but I feel like I learned more in this course than the rest of the degree combined. I finally "get" asynchronous programming: callbacks, continuations etc. Thank you!

What could be improved?

Comments
I just wanted more time to work on the project :(That is always the case with projects though, especially ones you enjoy.
There could be one less assignment (milestone) for the course considering that we are in trimesters and there are only 10 weeks. Especially difficult for students who take more than 2 courses in the term and/or work part time. Ed forum replies for questions were good at the beginning of the course but stopped after the mid way point of the term.
Note: these are mostly nitpicks, this is still easily one of my favourite courses so far – The Ed forum is very dead, a lot of threads never get acknowledged. For some reason the lab demonstrators are much more active on an informal discord server that one of the students made, so it's a bit annoying to have potentially relevant information buried on discord instead of the official course forum, – Some of the milestones are under–specified. For example, for the ps syscall in M6 required us to compute the size of a process. The only documentation for the format of this size is in sos.h which states that it should be in terms of the number of pages. We implemented it this way but our lab demonstrator was surprised and was expecting it to be in bytes instead. – For M5 it would be nice to note that pages should be unmapped to check if they've been used. My team and a few others didn't realise this and got showstopped. Even though in hindsight it's obvious that we should've done this, a small reminder in the spec

Comments
would’ve been appreciated because it was an easy detail to miss because M5 was quite an involved milestone. – The file system benchmark and M4 demo tests require us to copy the same data (e.g. a page full of just 1s). Changing this to be random data (e.g. having to copy a file filled with Lorem Ipsum text) would’ve been better because we actually had a bug where we kept copying the first 4k bytes of the stream over and over again (because we forgot to increment a pointer…) and we passed the demo and ended up catching the bug weeks later. – More details for what the demo for M5 and M6 will include would’ve been great because it felt like we were going in a bit blind, and it may also create inconsistencies in how different groups are assessed per milestone. For example, for M5 we had to copy a giant file (one of the image files) but we didn’t expect this so we hadn’t tested in advance. For M6 group just had to exec and kill a bunch of processes but another team got asked to do it with limited frames to test it alongside demand paging. More standardisation for milestone assessment would be nice in general to keep things fair.
Odroids constantly broke and have many issues, it would maybe be nice to hand out the odroids to the students instead
The course has way to much work. I was constantly playing catch up throughout the term and due to the assignment being the entire term these issues compounded. I was often left without time to properly engage with problem solving instead of just writing the first solution that would be inefficient. Furthermore the quality of the code I wrote was dramatically impacted by the amount of time we were given to complete the tasks. The workload of the course requires it to both take over your life and be your primary focus so when other life events occur you are left without many options.
I do not feel this course is compatible with life for most students. The sheer quantity of work required means I do not necessarily feel the "educational value to effort ratio" in this course is particularly high. Merely doing well in previous computer science coursework is not sufficient to do well in AOS – from what I've seen, that is more or less limited to people with experience in low level software through work or interest.
Sometimes the odroids were a bit faulty and would timeout (minor nitpick). A bigger issue is that the course seems to assume students have a reasonable knowledge of hardware which isn't taught in any of the prerequisites. I appreciate most of the students taking the course are bit nerdy about this sort of stuff and so will have learned it in their spare time, but for example I only learned the other day what the difference between Intel and ARM was. This made a lot of the lectures hard to understand at points. Perhaps you could have some of this stuff put in COMP1521 as it seems pretty important to know.
Late penalty around flex week: if the following occurred: – submitted milestone in week 5 – marked in week 7 (due to not attending campus in week 6) – small issue in milestone, need to resubmit a large penalty would be applied, since an entire week has passed, despite the error (possibly) being very small Figuring out how sel4 IPC works was confusing. It was explained in the lectures, but at a higher level than I was able to understand. Took quite a bit of chatting with other people before I could do M0. Odroid reliability – this was frustrating at times.
Some aspects of the system are under documented (for example some of the scheduling functions we get given from the kernel have incomplete documentation). The course discord was very useful for us all to share resources but it should probably be advertised as part of the course resources given how heavily it's utilised.
Course Forum questions were often delayed / never responded to.
Groups of 3 could potentially be more humane on the students, especially ones who have other courses or work to contend with. Please look into making the Netcon connection more reliable. This made working very inefficient at times. The lecture recording sound quality was not great, very quiet and difficult to hear. I realise this is largely out of the control of the course staff, but perhaps provide an alternative for students who can't make it to live lectures. An option would be to provide links to previous recordings that cover the same material.
I guess it wasn't anticipated that so many people would complete the course this time, so it seemed like the lab support was lacking. A single demo can take 20–30 mins and with so many groups needing marking it was often difficult to get general help from the tutors.