

Q1 UNSW & CSE strives to provide a safe respectful learning environment for all students - did you feel safe, respected and welcome to fully participate in the Operating System's lectures, tutorials, group work, and class forum?

Answered: 313 Skipped: 0

ANSWER CHOICES	RESPONSES	
Yes	99.36%	311
No	1.28%	4
Total Respondents: 313		

It is reassuring that there appears to not be a significant "no" response to this question.

## Q2 If you answered no to Q1, can you provide more information?

Answered: 13 Skipped: 300

#	RESPONSES	DATE
1	have not know a group member	5/16/2019 5:23 PM
2	responsible	5/16/2019 12:34 PM
3	I answered yes	5/15/2019 10:20 PM
4	some of agree. But group work is hard to work together.	5/13/2019 2:08 PM
5	nice organised	5/10/2019 2:08 PM
6	I answered Yes	5/7/2019 12:38 AM
7	For me myself, 3 courses have 3 different forum platforms, such as moodle, piazza, and webcms. It is not something serious but it can be better.	5/6/2019 1:49 PM
8	N/A	5/6/2019 11:23 AM
9	None	5/6/2019 9:06 AM
10	Yes, It was a great learning environment.. it was interactive.. and it was so easy to get the doubts cleared	5/6/2019 12:46 AM
11	n/a	5/6/2019 12:05 AM
12	My partner for projects often treated me as though I was below him. I felt like we couldn't discuss things, rather it was delegation. Also, in tutorials and lectures, my partner would try to talk to me while the tutor/professor was explaining stuff, which I found disrespectful to the tutor, professor, other students around us, and myself. I stopped going to lectures and went to a different tutorial to avoid being distracted. As for the tutor and the professor, they were great! The tutor helped a lot, and both the professor and tutor were very knowledgeable and friendly.	5/5/2019 11:44 PM
13	kaboot was good for contributing	5/5/2019 11:41 PM

**It is unfortunate that you had an awkward if not unpleasant experience within the group. I would have expected more maturity from your partner.**

Q3 Give a high rating if you have a good opinion of something (e.g. interesting, useful, well-structured, etc.). Give a low rating if you have a bad opinion of something (e.g. too slow, confusing, disorganised, etc.)

Answered: 308 Skipped: 5

	EXCELLENT	(NO LABEL)	SATISFACTORY	(NO LABEL)	POOR	N/A	TOTAL	WEIGHTED AVERAGE
Lecturer: Kevin Elphinstone	82 71.75% 221	21.75% 67	5.84% 18	0.00% 0	0.00% 0	0.65% 2	308	4.66
General OS lectures	54.22% 167	29.87% 92	13.96% 43	0.97% 3	0.32% 1	0.65% 2	308	4.38
Your tutor	44.81% 138	22.08% 68	16.88% 52	4.55% 14	1.95% 6	9.74% 30	308	4.14
Tutorials	50 37.66% 116	26.30% 81	23.38% 72	2.27% 7	0.97% 3	9.42% 29	308	4.08
Asst1: Synchronisation	80 54.22% 167	28.57% 88	14.94% 46	1.95% 6	0.32% 1	0.00% 0	308	4.34
Asst2: Syscalls	70 47.08% 145	29.87% 92	17.86% 55	4.55% 14	0.65% 2	0.00% 0	308	4.18
Asst3: Virtual Memory	80 41.23% 127	28.90% 89	20.13% 62	7.14% 22	2.27% 7	0.32% 1	308	4.00
Textbook	14.29% 44	14.94% 46	19.48% 60	2.60% 8	0.97% 3	47.73% 147	308	3.75
Computing resources	32.79% 101	29.87% 92	20.78% 64	4.22% 13	1.30% 4	11.04% 34	308	4.00
Course web page	30 47.40% 146	28.25% 87	17.53% 54	4.87% 15	1.62% 5	0.32% 1	308	4.15
Piazza message board	50 62.01% 191	18.83% 58	14.61% 45	2.60% 8	1.30% 4	0.65% 2	308	4.39
Wiki	47.73% 147	25.32% 78	22.08% 68	3.57% 11	0.65% 2	0.65% 2	308	4.17
Help with technical questions	52.27% 161	24.68% 76	15.26% 47	0.32% 1	0.00% 0	7.47% 23	308	4.39
Lecture slides	45.78% 141	31.82% 98	16.88% 52	4.22% 13	0.97% 3	0.32% 1	308	4.18
Lecture video capture	75.32% 232	15.26% 47	6.49% 20	0.97% 3	0.32% 1	1.62% 5	308	4.67
Operating Systems overall	55.19% 170	33.44% 103	9.09% 28	1.62% 5	0.32% 1	0.32% 1	308	4.42

Significant changes(from 2016) in the "excellent" column highlighted, past approximate value in red.  
 I took a small dip. Unclear why from the feedback. Main difference from where I sit has been another significant drop in attendance, but that does not necessarily relate to each other.  
 Tutorials took a dip, with the plausible factor being trimesters. Same material, less tutorials, and last term, no tutorial after the last week of lectures.  
 The assignments took a dip, despite attempt to reduce scope and streamline. I'll leave analysis to later in survey.  
 The web page and piazza improved. Unclear why the web page was viewed differently, but this term my goal was to encourage less noise and more self-help in piazza - it seems to have worked.

## Q4 Would you recommend this course to another student such as yourself?

Answered: 304 Skipped: 9

ANSWER CHOICES	RESPONSES	
Yes	92.76%	282
No	7.24%	22
TOTAL		304

97% 2016

Probably some natural variability here, but I suspect trimesters had an influence here.

## Q5 What was the best thing about the course?

Answered: 270 Skipped: 43

#	RESPONSES	DATE
1	everything	5/17/2019 2:14 PM
2	My tutor	5/17/2019 12:27 PM
3	The progression of introducing history of each topic, moving onto failed implementations and then concluding with successful implementations was very conducive to fully understanding concepts.	5/17/2019 4:43 AM
4	Letting me know about how OS works	5/17/2019 3:52 AM
5	The detailed understanding I now have of operating systems.	5/16/2019 9:27 PM
6	Good spacing between assignments	5/16/2019 9:08 PM
7	I think it is hard to me but the content is really useful for this major	5/16/2019 5:24 PM
8	The course content was useful and informative. The assignments were valuable learning exercises and the lecturer was excellent.	5/16/2019 5:16 PM
9	The topics covered was very practical and useful	5/16/2019 4:43 PM
10	the assignments	5/16/2019 3:54 PM
11	The Content was quite interesting and the lecture delivered the information well. the tutorials were also very good, the tutor i had used kahoot which was a very engaging way of covering the content and resulted in the highest participation rate i have seen so far in tutorials.	5/16/2019 3:15 PM
12	Difficult assignments	5/16/2019 2:52 PM
13	idk	5/16/2019 12:58 PM
14	What I learned from this course	5/16/2019 12:36 PM
15	Deeper understanding of the fundamental components of computer science and how software and hardware interact	5/16/2019 11:45 AM
16	The lectures were very nice, this is the first course where I watched all of the lectures, because I was genuinely interested in the content and quality of the lectures	5/16/2019 11:36 AM
17	The assignments were interesting and challenging, and the course was well taught with useful and interesting content.	5/16/2019 11:33 AM
18	Interesting content	5/16/2019 11:28 AM
19	Interesting & challenging assignments	5/16/2019 10:27 AM
20	The assignments, although can be made a bit more extensive in depth+breadth. CMU's OS course has an amazing set of assignments. However, I really enjoyed working with my partner on them.	5/16/2019 8:47 AM
21	Piazza forums and course collaboration	5/16/2019 8:16 AM
22	General structure and conduct of the course. Content well taught and interesting	5/16/2019 3:04 AM
23	Doing the assignments, especially the last two. OS dev is fun :D	5/16/2019 1:06 AM
24	The content	5/16/2019 12:33 AM
25	learn something useful	5/16/2019 12:33 AM
26	Learned a lot and course was practical.	5/16/2019 12:03 AM
27	Kevin is a fantastic lecturer and the course content was very interesting. Hands down I wanted more!	5/15/2019 11:49 PM
28	Very interesting content, gives a different perspective than a lot of other courses.	5/15/2019 11:48 PM
29	Extensive support through Piazza	5/15/2019 11:32 PM
30	The assignments were in-depth and required thinking through the content in detail, greatly enhancing my knowledge of the subject and making me feel like I learnt things.	5/15/2019 11:31 PM
31	The best thing about course is Kevin, the way he explain using pencil is very effective.	5/15/2019 11:17 PM
32	Great lecturer	5/15/2019 11:15 PM
33	Getting to know how various systems come together in an OS to make programs just work.	5/15/2019 11:13 PM

**Kahoot use was a little divisive. I happy to tutors to tutor in the way they are most comfortable.**

**Unfortunately, with the broad cohort, even semesters were too short to do much more. That's why the bonus options are available.**

34	Foundational knowledge	5/15/2019 11:11 PM
35	The lecturer and the low level system programming	5/15/2019 11:11 PM
36	assignments	5/15/2019 10:24 PM
37	Assignments	5/15/2019 10:23 PM
38	- Mix of individual assignments and pair-assignments	5/15/2019 7:57 PM
39	Piazza, it was great to see how well it was monitored. Really shows how much the lecturer and the staff care.	5/15/2019 5:56 PM
40	The lectures, the content was explained really well	5/15/2019 4:45 PM
41	Lectures!!!	5/15/2019 1:33 PM
42	Tutorial Kahoot questions	5/15/2019 11:45 AM
43	hands on practical experience with a learning os	5/14/2019 5:41 PM
44	Well structured assignments and the obvious applicability of the things that were being taught.	5/14/2019 4:49 PM
45	Learning about the actual nuances underlying the previous courses I've taken in computer science.	5/14/2019 4:25 PM
46	The structure of the course, and how well it was taught. I came into the course with zero OS knowledge (and only first year comp subjects completed) but I found the content to be structured in such a way that anybody with computing knowledge could pick it up. Kevin is an excellent lecturer and explains things really well. The structure and Kevin's skill teaching combined made this my favourite COMP subject so far.	5/14/2019 1:13 PM
47	The lecturer and the lecture slides. Things were just explained so clearly. And with the slide/lecture recording player, it was so easy to revise content.	5/14/2019 12:19 PM
48	Although I didn't participate in the piazza forums, I still found it very helpful as a learning tool to clear up any personal doubts and just reading random answers.	5/14/2019 11:32 AM
49	Assignment part is my favorite.	5/13/2019 6:41 PM
50	Kevin found a way to make the content interesting and fun to learn. Also my tutor used funny analogies which made it easy to learn the content and remember it	5/13/2019 4:36 PM
51	The teaching method.	5/13/2019 2:12 PM
52	Learn a heap of concept about the low level, which may help my interview back in China	5/13/2019 2:04 PM
53	Once it clicks it clicks	5/13/2019 2:01 PM
54	content was interesting and lectures were clear	5/13/2019 2:00 PM
55	The content.	5/13/2019 1:53 PM
56	The way the lecturer records the lectures while drawing on the screen (also sometimes with animations).	5/13/2019 1:43 PM
57	Interesting content	5/13/2019 1:27 PM
58	Os is interesting	5/13/2019 1:05 PM
59	Kevin, my tutor Louis and the content overall	5/12/2019 10:26 PM
60	The course materials provide a comprehensive explanation on operating systems	5/12/2019 3:29 PM
61	The course content and the structure. It was incredibly interesting and everything taught was relevant. Lecturer was also very engaging and wasn't condescending to students questions	5/12/2019 1:19 PM
62	Kevin is a great lecturer who's able to explain a complex course to the level of understanding of his students the assignments are also a great help to understanding the material of the course	5/12/2019 12:07 PM
63	Learning about the operating system and doing the assignment actually taught me a lot!	5/12/2019 10:44 AM
64	Assignment walkthroughs were helpful	5/11/2019 11:51 PM
65	Good lecturer and tutor, interesting content	5/11/2019 11:16 PM
66	lecturer was great, content covered helped a lot with general understanding	5/11/2019 10:16 PM
67	Lecturer - Kevin makes what could be quite challenging content easy to understand.	5/11/2019 3:55 PM
68	Lecture recording with handwritten notes	5/11/2019 3:50 PM
69	The assignments were complex enough to foster a deep understanding of the	5/11/2019 1:04 PM

	course material relevant to what we had to implement.	
70	Content	5/11/2019 11:09 AM
71	Algorithm theory and implementation freedom within assignments	5/10/2019 6:17 PM
72	Learning the content, basically the implementations we use daily that take for granted	5/10/2019 6:06 PM
73	I think the explanation of what's going on behind the scenes (which every other course just says "don't worry" about)	5/10/2019 5:17 PM
74	██████ is a great tutor	5/10/2019 5:13 PM
75	The content. Very interesting topic	5/10/2019 2:35 PM
76	useful in the real world	5/10/2019 2:12 PM
77	The challenge of the assignments	5/10/2019 12:32 PM
78	Assignment based course	5/10/2019 11:29 AM
79	The assignments. Implementing various parts of the kernel was enjoyable	5/10/2019 11:02 AM
80	The course content is explained well, the learning outcomes are clearly indicated and it's easy to match-up lectures with slides	5/10/2019 10:53 AM
81	interesting content	5/10/2019 2:12 AM
82	Memory management and general information about OS	5/10/2019 1:34 AM
83	Really interesting to learn about the what the os does and the technical considerations. I particularly enjoy that we're not just learning about what needs to be done to make a good os but what has been done historically and where previous methods fall short that more modern systems address	5/9/2019 9:39 PM
84	The lecturer gives quick responses on piazza	5/9/2019 3:44 PM
85	Being able to work on semi-realistic problems.	5/9/2019 2:54 PM
86	The course was very challenging - a lot of thinking to do, but it was very rewarding when I finally understood a concept and its application	5/9/2019 2:29 PM
87	The lecturer's deep explanation of all the complex concepts, regarding OS	5/9/2019 11:14 AM
88	Professor considers students as human beings and not cattle.	5/9/2019 10:59 AM
89	In depth knowledge	5/9/2019 1:54 AM
90	great lectures, fun assignments	5/8/2019 11:45 PM
91	locks and semaphores	5/8/2019 11:39 PM
92	content is interesting	5/8/2019 9:15 PM
93	the assignments	5/8/2019 8:50 PM
94	Tutorial Involvement	5/8/2019 7:49 PM
95	I liked learning about computers from a bottom up approach. I am able to realise why certain things happen and how to code around them so they aren't a problem for my programs.	5/8/2019 6:26 PM
96	The assignments were fun	5/8/2019 6:20 PM
97	Content was very well organised and communicated very well by the lecturer. Also content is useful in pretty much any industry you end up in	5/8/2019 4:49 PM
98	Learning how OS works was so helpful for every other course. (such as Networks and Database). Also people in Piazza was so active! They really trying to help each others especially Kevin.	5/8/2019 4:31 PM
99	help reshape my idea about how the software in a computer works	5/8/2019 2:42 PM
100	Assignments really gave a different perspective. You think you know more than you do but when you actually spend time on the assignments you really learn more.	5/8/2019 1:56 PM
101	The assignments are very helpful	5/8/2019 12:28 PM
102	well course structure, well support from the piazza and course webpage	5/8/2019 11:19 AM
103	good practice	5/8/2019 5:42 AM
104	Being able to work on a large scale codebase and applying concepts and theory.	5/7/2019 10:59 PM
105	Tutor was amazing	5/7/2019 9:07 PM
106	The assignments	5/7/2019 8:35 PM
107	Well managed	5/7/2019 7:56 PM
108	Working within a larger project (OS161)	5/7/2019 7:54 PM

Ouch. Happy you noticed the effort.

109	The assignments were challenging	5/7/2019 7:26 PM
110	Good overview for modern operating systems	5/7/2019 6:15 PM
111	To learn low level designs of the OS without having being too dry and overwhelmed by the content.	5/7/2019 4:54 PM
112	Having reached the end of it, I feel like I am coming away with a significantly better understanding of how the OS operates than I did before - it was delivered excellently by Prof Kevin Elphinstone.	5/7/2019 4:21 PM
113	Content is interesting and Kevin always explains it in depth. Assignments were actually relevant and reflective of what we were learning.	5/7/2019 4:15 PM
114	Useful	5/7/2019 3:58 PM
115	This course shows a clear explanation of the operation system. Let me have a brief idea of how the computer works.	5/7/2019 3:55 PM
116	You learn quite a lot and gain confidence in your abilities.	5/7/2019 3:48 PM
117	Interesting and useful course	5/7/2019 3:32 PM
118	Challenging yet satisfying assignments	5/7/2019 2:34 PM
119	the tutorial questions and learning resources	5/7/2019 12:56 PM
120	The content was very interesting	5/7/2019 12:19 PM
121	The lecturer and the content of the course.	5/7/2019 11:25 AM
122	learning about all the uses of operating systems and how they work with practical work (assignments) even if it was on a basic system	5/7/2019 10:54 AM
123	Good support from tutors and lecturers regarding course content, and answering questions, both in person and on the class forum	5/7/2019 10:50 AM
124	The assignments, especially the one on concurrency	5/7/2019 10:02 AM
125	This course gives me a deeper understanding of how a whole computer system works, with quite a lot of C programming.	5/7/2019 5:18 AM
126	Good knowledge and technical practice	5/7/2019 3:15 AM
127	Learning what is happening at the lower level of the computer so I wont have to treat it as a magic black box	5/7/2019 1:58 AM
128	Gaining an understanding of how concepts such as linked lists are applied to something concrete e.g. maintaining linked list of regions for assignment 3	5/7/2019 12:41 AM
129	Learnt alot	5/6/2019 11:36 PM
130	The content was covered very well and in lots of detail	5/6/2019 11:33 PM
131	LECTURE RECORDING	5/6/2019 11:11 PM
132	It was very well organised. Any questions on Piazza were answered very promptly, which was really helpful.	5/6/2019 11:10 PM
133	Having an actual small operating system to work with	5/6/2019 10:42 PM
134	Hard to decide between interesting content and great lecturer/course co-coordinator Kevin. (Loved the bonus marks for early submission and I wish more courses did it)	5/6/2019 10:28 PM
135	The assignments	5/6/2019 10:22 PM
136	Interesting content which was taught well and assignments were challenging yet do-able.	5/6/2019 10:22 PM
137	It's structured nicely.	5/6/2019 10:01 PM
138	Gaining an appreciation for the mad complexity of operating systems. Becoming comfortable in a huge code base.	5/6/2019 9:50 PM
139	Course resources were well labelled. e.g. lecture videos where split and labelled by lecture slides, lecture videos were posted in correlation to a topic, making it really easy to access the exact video need to clarify understanding on a certain topic	5/6/2019 8:52 PM
140	Lectures and the lecturer - Thanks for explaining the course content so clearly with some really great examples that guide us into understanding why certain things are the way that they are. It definitely helps with committing that memory to your brain when you actually understand why. As someone who watched all lectures online, the online recordings are superb. Super clear and it never felt like I was missing out on anything since all examples and pointers were also displayed on the screens.	5/6/2019 8:34 PM
141	interesting content overall	5/6/2019 7:25 PM
142	interesting contents inspring assignments	5/6/2019 6:49 PM

I try, but the downside is that I'm getting lonely in the lecture theatre :( I'm not sure I be as good if I lecture to an empty audience.....



143	The assignments	5/6/2019 5:58 PM
144	The hands on, practical, assignment based approach	5/6/2019 5:48 PM
145	the theory and learning about operating systems - very practical and deep look into how computers actually work today	5/6/2019 4:54 PM
146	Tutor	5/6/2019 4:27 PM
147	Practical and useful	5/6/2019 4:17 PM
148	Course was well structured; no surprises. Assignments were related to course content and allowed students to demonstrate what they had learned.	5/6/2019 4:02 PM
149	Learnt many new things!	5/6/2019 3:59 PM
150	Challenge part of assignment, Lecture	5/6/2019 3:12 PM
151	Super interesting content and good lecturer	5/6/2019 2:16 PM
152	The content is very interesting and I enjoyed understanding them and seeing them work in real life	5/6/2019 2:03 PM
153	a general idea of OS	5/6/2019 1:54 PM
154	Assignments are good.	5/6/2019 1:48 PM
155	It's is nice to have a lecturer that is so passionate and knowledgeable about the course. It makes learning the theory fun and engaging.	5/6/2019 1:48 PM
156	Good lecturing, good assignments	5/6/2019 1:42 PM
157	Exposure to large code base, requires us to understand the components like in real life.	5/6/2019 1:28 PM
158	It was very well structured and never felt like things were being rushed at any given stage	5/6/2019 12:55 PM
159	The assignments. The lecturer is very well informed.	5/6/2019 12:53 PM
160	The content is the most interesting thing. Not having labs are also good.	5/6/2019 12:46 PM
161	I actually enjoyed the content and although the assignments were difficult, definitely deepened my understanding.	5/6/2019 12:46 PM
162	good contents, good lecturer	5/6/2019 12:17 PM
163	Learning about operating systems in a specific way, and the specifics of what an OS does. I'd never thought about it before, or acknowledged how much control an OS has over the hardware of a computer.	5/6/2019 12:15 PM
164	Experience with data structures in C programming	5/6/2019 12:10 PM
165	Great lecturer and interesting material	5/6/2019 12:09 PM
166	Assignments were very helpful in understanding concepts.	5/6/2019 12:03 PM
167	Learn the principles. Challenging assignment really help you to learn	5/6/2019 12:00 PM
168	Truely understanding what goes on in the background of computers when they are running slow/crashing/lose files etc	5/6/2019 11:54 AM
169	Learning about the OS in depth.	5/6/2019 11:50 AM
170	Detail and Overview of what goes on inside the computer. I learnt a lot. I feel it helped my understanding of how applications interact with the OS and how as programmers we have to be aware of the quality of our code.	5/6/2019 11:48 AM
171	The content was really interesting and really well explained	5/6/2019 11:41 AM
172	Bonus marks for assignments, plus the assignments in general.	5/6/2019 11:26 AM
173	██████████ was a great tutor, getting the whole class engaged in discussion and explaining well	5/6/2019 11:25 AM
174	Interesting content delivered with all necessary context. Was challenging course but given everything needed to succeed.	5/6/2019 10:49 AM
175	I enjoyed the practicality of the content. This was the first CS course that I have taken that I have felt has begun to properly prepare me for a job/research position.	5/6/2019 10:44 AM
176	The content of the course was interesting and the assignments requires a good understanding of the content to do satisfactorily.	5/6/2019 10:40 AM
177	the content is interesting the assignments are beneficial for IT learner the best part is any questions will be answered in forum within limited time , thank you so much for that !!	5/6/2019 10:33 AM
178	Provided information often relevant but not discussed in other courses.	5/6/2019 10:26 AM
179	- The staff are extremely helpful and supportive (online on piazza, in course consultations and tutors - Jas was my tutor and helped me a lot!). The lectures	5/6/2019 10:22 AM

being categorised by slides is really helpful. (I wish all COMP courses were set this way with the lecture slides and using piazza)

180	The transparency of the course was great - we knew exactly what we were going to cover, and any updates was announced far in advance.	5/6/2019 10:21 AM
181	You learn a lot	5/6/2019 10:00 AM
182	The lectures were very clear	5/6/2019 9:49 AM
183	The content was interesting and seems like it will be useful in the future.	5/6/2019 9:42 AM
184	The assignments. Really help to solidify understanding of course content, and are fun to complete.	5/6/2019 9:40 AM
185	Learning lower level concepts.	5/6/2019 9:31 AM
186	Learning how to make code more efficient	5/6/2019 9:24 AM
187	Kevin is a good lecturer	5/6/2019 9:10 AM
188	Learnt a wide variety of things about Operating Systems and even got to apply this practically which I enjoyed very much.	5/6/2019 9:07 AM
189	Learning about what happens underneath your application. Syscalls and synchronisation	5/6/2019 8:45 AM
190	Fair marking, responsive tutors/LiC	5/6/2019 8:29 AM
191	Learning about a lot of crucial computer science concepts	5/6/2019 8:20 AM
192	Depth of assignments	5/6/2019 8:04 AM
193	Kevin is a fantastic lecturer	5/6/2019 8:02 AM
194	I think most of the lectures in this course is well structured. Given the breath of an os. It's surprisingly pretty amazing.	5/6/2019 7:44 AM
195	Course was well structured compared to a lot of other courses. Help readily available on piazza, this was greatly appreciated. Kevin made an effort to make the videos just as informative as attending the lecture (e.g. by repeating student questions into the microphone and recording all annotations in the video rather than pointing to the screen in real life)	5/6/2019 3:35 AM
196	Getting a feel for how an operating system works through implementing the assignments	5/6/2019 2:28 AM
197	useful course content	5/6/2019 2:25 AM
198	Understanding how computer at a lower level how it works and it got to what it is today	5/6/2019 2:23 AM
199	The assignments were fun and pretty flexible. It felt like just the right amount of railroading.	5/6/2019 2:18 AM
200	The OS161 structure was extremely interesting to learn about and interface with.	5/6/2019 1:58 AM
201	Unveiling what's going on behind the programs we write and run. The virtual memory section was particularly fascinating. I also enjoyed the OS/161 programming environment which was easy to read, trace, and understand. I also appreciated when things were brought back to the real world with unix/windows examples as well as computer history.	5/6/2019 1:46 AM
202	Lecture video quality	5/6/2019 1:38 AM
203	Assignment	5/6/2019 1:27 AM
204	Lecture videos are pretty detailed. A lot more information about topics compared to other courses.	5/6/2019 1:20 AM
205	- Learning about how syscalls work and how to implement them in the kernel in the appropriate assignment - Getting a skeleton/description of functions we had to implement in assignments	5/6/2019 1:07 AM
206	Content	5/6/2019 1:01 AM
207	The Content of the course was really interesting. Working with practical experience of an OS, really helps learning how everything works	5/6/2019 12:53 AM
208	interesting, challenging in a good way, great lecturer, course was organised well	5/6/2019 12:50 AM
209	Kevin managed to provide us with knowledge and understanding on a range of os related topics	5/6/2019 12:50 AM
210	The forum especially being able to see what questions other students were asking.	5/6/2019 12:49 AM
211	the lectures and the assignments..	5/6/2019 12:49 AM
212	Understanding the low level stuff and how helpful the piazza was to answer any questions as students helped each other at times	5/6/2019 12:47 AM

213	Well-structure, useful knowledge and good lecturer.	5/6/2019 12:44 AM
214	Enjoyed topics on concurrency and file systems	5/6/2019 12:31 AM
215	The staff and the content, Surely the lecturer is very kind and knowledgable. The tutors were very enthusiastic to teach. Generally, everything is good.	5/6/2019 12:26 AM
216	Lecturer, content and in-depth assignments	5/6/2019 12:25 AM
217	assignment	5/6/2019 12:19 AM
218	The content is very interesting and useful.	5/6/2019 12:16 AM
219	Lectures customised with appropriate cuts, no ECHO360	5/6/2019 12:13 AM
220	The satisfaction of getting assignments working	5/6/2019 12:12 AM
221	Tough assignments which require proper planning and the 10/10 video recordings	5/6/2019 12:10 AM
222	Challenging, pushed us to try our best.	5/6/2019 12:09 AM
223	I expected the course to be a high level course on OS, but the course made us work with and code actual OS concepts which was really good.	5/6/2019 12:08 AM
224	The content. It's quite interesting. Good assignments.	5/6/2019 12:06 AM
225	Gives very important to know understanding of OS internals, practical applications of algorithms and data structures teachings from other courses.	5/6/2019 12:05 AM
226	Lecture content	5/5/2019 11:58 PM
227	This course teaches us a useful knowledge which is pretty essential for our future development in cs field.	5/5/2019 11:57 PM
228	The lecture slides are great, no useless content, just simple and general concepts.	5/5/2019 11:57 PM
229	The lectures and tutorials are organized. The recording is high-quality. The assessments help students have a better understanding of the course on the programmer side.	5/5/2019 11:56 PM
230	Assignment is interesting, Kevin is good.	5/5/2019 11:55 PM
231	Content was delivered in a very digestible way with understandable examples, which we were able to apply in a albeit challenging environment	5/5/2019 11:53 PM
232	Everything, really useful information. A really great high level overview of everything in operating systems. Fantastic, well thought out assignments that had the right level of difficulty. No echo 360 was really nice as well. Really appreciated the extra time Kevin took making his own videos.	5/5/2019 11:53 PM
233	Lecture recordings, manageable assignments, good use of version control	5/5/2019 11:53 PM
234	It's Kevin, he's probably the best lecturer of CSE as far as I know. So responsive, every questions will be reasonably treated in piazza.	5/5/2019 11:53 PM
235	The content was really interesting and clearly relevant to the real world. I learned a lot and it made my work in other courses (computer architecture) easier as well. In fact both of these courses taken together has been thoroughly fun and enjoyable, and I'm sad it's coming to an end.	5/5/2019 11:52 PM
236	Concurrency was interesting	5/5/2019 11:52 PM
237	Interesting content, assignments greatly assisted in learning the underlying concepts	5/5/2019 11:52 PM
238	The lectures were very well put together and organized. I felt like I got a lot out of lectures. The professor did a great job explaining concepts and providing examples.	5/5/2019 11:51 PM
239	The lecturer	5/5/2019 11:46 PM
240	I loved how Kevin goes through history and explains why things are the way they are now. It's very logical and definitely made the course more interesting, compared to 1521 which was a course I really hated.	5/5/2019 11:45 PM
241	The assignments were very interesting	5/5/2019 11:44 PM
242	Interesting content and good lecturer	5/5/2019 11:43 PM
243	The content was interesting and assignments are relevant and challenging.	5/5/2019 11:43 PM
244	The lectures were really interesting because they gave a good overview of operating systems, how interactions occur and explanations were well done.	5/5/2019 11:42 PM
245	Conflicting objectives faced by the operating systems in efficiently supporting a wide range of applications.	5/5/2019 11:41 PM
246	Kevin is a great lecturer and the content is really interesting. Also very relevant. The consultations were great and [REDACTED] was awesome in helping answer our questions. Both [REDACTED] and Kevin were super responsive on Piazza which	5/5/2019 11:37 PM

	great.	
247	The detail and depth explored for each topic	5/5/2019 11:36 PM
248	Knowing a lot of things about OS.	5/5/2019 11:35 PM
249	useful material for CS and well structured	5/5/2019 11:35 PM
250	Great content, very useful and practical. Assignments allowed for application of the theory learned, was a great experience.	5/5/2019 11:35 PM
251	The content was very interesting. Kevin as a lecturer was excellent.	5/5/2019 11:35 PM
252	all of the assignments	5/5/2019 11:34 PM
253	Content	5/5/2019 11:34 PM
254	It gives good foundations on important topics like concurrency, and helps you to better understand how a computer actually works.	5/5/2019 11:34 PM
255	The assignments	5/5/2019 11:33 PM
256	Learning about OS. The assignments were interesting too	5/5/2019 11:33 PM
257	interesting content	5/5/2019 11:32 PM
258	the content is amazing	5/5/2019 11:32 PM
259	Staffs and the forum and those interesting assignments	5/5/2019 11:32 PM
260	The lecture content and the lectures themselves were really detailed and well done and Kevin is very good at explaining the concepts.	5/5/2019 11:32 PM
261	It felt like something that would be extremely difficult to learn well outside uni context, and opens up a pathway of interest that you can't just stumble onto.	5/5/2019 11:32 PM
262	the detail of kernel system	5/5/2019 11:31 PM
263	Interesting content that was well delivered. [REDACTED] was a great tutor	5/5/2019 11:31 PM
264	I have a lot challenge to do	5/5/2019 11:31 PM
265	Awesome lectures and tutorials	5/5/2019 11:30 PM
266	Assignments definitely made sure you understood what was being taught in the lectures	5/5/2019 11:30 PM
267	the entire course was interesting	5/5/2019 11:29 PM
268	A hands on experience with OS/161	5/5/2019 11:29 PM
269	Tutes	5/5/2019 11:28 PM
270	The nitty gritty of how to build an os	5/5/2019 11:28 PM

**Thanks for the mostly complimentary feedback. I seems a lot of what I hope to achieve with the course is happening.**

## Q6 What was the worst thing about the course?

Answered: 257 Skipped: 56

#	RESPONSES	DATE
1	nothing	5/17/2019 2:14 PM
2	Assignment 3 very difficult	5/17/2019 12:27 PM
3	I got nothing bad to say.	5/17/2019 4:43 AM
4	It is a very difficult course on coding, I need a lot of time to understand but still find it was confusing.	5/17/2019 3:52 AM
5	Sometimes the content can seem to be a bit overly detailed at times.	5/16/2019 9:27 PM
6	Lecture slides should have some more content other than diagrams	5/16/2019 9:08 PM
7	assignment is hard	5/16/2019 5:24 PM
8	Tutorials could be improved to cover more than just true false questions at that is only 40% of the exam	5/16/2019 5:16 PM
9	Piazza is hard to use	5/16/2019 4:43 PM
10	not a criticism per se, but there was a lot of content to memorize compared to other COMP courses	5/16/2019 3:54 PM
11	Information was kind of everywhere, from the forms to the wiki and the specifications, this was actually really time consuming to keep checking and often resulted in missing pieces of information about the assignment only to find them later after a section was already done (not great when your in trimesters and are already short on time), additional this resulted in things being a bit unclear at times. the content also felt a little rushed towards the end of the course.	5/16/2019 3:15 PM
12	topics are not separated	5/16/2019 12:58 PM
13	None	5/16/2019 12:36 PM
14	Time, really stressful with the assignments overlapping. Never got a break! NEGATIVE MULTIPLE CHOICE	5/16/2019 11:45 AM
15	The feeling of being thrown in the deep end for the last 2 assignments, it was very time demanding	5/16/2019 11:36 AM
16	The course had several different websites (main page, forums, wiki) that made it difficult to navigate and find information at times.	5/16/2019 11:33 AM
17	Tutorials could do a better job at covering content.	5/16/2019 11:28 AM
18	Lecture delivery as the main form of absorbing content. Despite them being well produced and presented, it's not too valuable to just _learn_ about these concepts without having associated material to experiment and critique. This can be done on my own, but I think all students should experience this.	5/16/2019 8:47 AM
19	Assignments lacked a lot of information about basic data structures that were expected of us to implement and weren't really covered in the lectures in detail. For example address space data structure and regions in Asst3	5/16/2019 8:16 AM
20	Bit cranky toward the end but that's probably a result of trimesters	5/16/2019 3:04 AM
21	Lecture slides	5/16/2019 1:16 AM
22	Debugging	5/16/2019 1:06 AM
23	Too cramped and compressed due to trimesters	5/16/2019 12:33 AM
24	there are too many things too learn since it's only 10 weeks now	5/16/2019 12:33 AM
25	A little too much content jam packed in.	5/16/2019 12:03 AM
26	The assignments in the course felt rushed and content was pulled from the 3rd assignment to make it tenable under trimesters	5/15/2019 11:49 PM
27	N/A	5/15/2019 11:48 PM
28	Is a prereq to another course. I do not really want to take it if I have a choice.	5/15/2019 11:32 PM
29	Sometimes particular resources were a little hard to find	5/15/2019 11:31 PM
30	Assignment 2 and 3 were a bit hard	5/15/2019 11:17 PM
31	The way marks are scaled	5/15/2019 11:15 PM
32	-	5/15/2019 11:13 PM

33	Lack of resources online	5/15/2019 11:11 PM
34	My tutor	5/15/2019 11:11 PM
35	exam - lots of memorisation involved	5/15/2019 10:24 PM
36	Exam	5/15/2019 10:23 PM
37	- Lecture recording audio being static-y at times	5/15/2019 7:57 PM
38	The amount of content was immense. It was a shame because a lot of it was quite interesting.	5/15/2019 5:56 PM
39	Nothing really stood out as bad	5/15/2019 4:45 PM
40	Some wiki information about setting up locally wasn't clear enough/didn't have enough information and I had to book a consultation. However, one consultation (the whole hour) was not enough to set up on my personal machine, and I think that's a strong indicator that the current wiki information is not sufficient for a student to set up by themselves. But this is a minor issue! Thank you for a great course!	5/15/2019 1:33 PM
41	tight schedule	5/15/2019 11:45 AM
42	harmonic mean marking feels soul crushing	5/14/2019 5:41 PM
43	N/A	5/14/2019 4:25 PM
44	Trimesters clearly made things more cramped. The last two assignments took a lot of time and mental energy and were essentially back to back. It would have been better to have even a short break between them to get our head around the new content before diving back into practical application. I know there is nothing Kevin can do, but maybe if enough students and staff complain we'll get somewhere... (probably not)	5/14/2019 1:13 PM
45	I wish tutorials were longer. Because of trimesters, it seems that content had to be squeezed in.	5/14/2019 12:19 PM
46	The assignments left me very confused and required a lot of re-reading and consulting external resources to just get started. Without these other resources (including piazza) filling in the gaps, I'm pretty sure I wouldn't have been able to finish the last two with just the given information.	5/14/2019 11:32 AM
47	Nothing is bad.	5/13/2019 6:41 PM
48	I found assignment 3 was a bit rushed. Also, I thought that the final exam was much harder than the samples	5/13/2019 4:36 PM
49	Assignments	5/13/2019 2:12 PM
50	Time is too short for so many contents. Don't have enough time for the last assignment	5/13/2019 2:04 PM
51	Assignments can be hard to get your head around for a while and can be a bit intimidating.	5/13/2019 2:01 PM
52	Better organisation is needed for future terms it felt a bit rushed in the last few weeks. Trimester teething problems i suppose	5/13/2019 2:00 PM
53	It being really hard.	5/13/2019 1:53 PM
54	Some of the exam questions seemed to be more so testing the ability to regurgitate rather than having an understanding of the topic.	5/13/2019 1:43 PM
55	Felt too crowded/overpacked with information	5/13/2019 1:27 PM
56	Too hard to get mark	5/13/2019 1:05 PM
57	Time constraints. There's less time than before and we pretty much have the same amount of content to cover.	5/12/2019 10:26 PM
58	Trimesters. I would have loved to spend a few more weeks on asst2 and asst3 properly getting to know everything. As it was, it was a mad dash to submit the course content. More a wish than a complaint	5/12/2019 1:19 PM
59	none that I can think of.	5/12/2019 12:07 PM
60	Too much content to go through (saying this as im trying to cram the course)	5/12/2019 10:44 AM
61	Some of the concepts are just hard to grasp	5/11/2019 11:51 PM
62	Felt like almost too much content for 10 weeks. Would have been nice to have an extra tutorial after the last lecture, instead of having three lecturers following the last tutorial.	5/11/2019 11:16 PM
63	tough to get started on the assignments, code was dense and a lot of tutorial questions for the assignments were more focused on specific details, but personally didnt help as much in establishing a broad overview of whats happening in the code which again personally would have helped a lot	5/11/2019 10:16 PM
64	Trimesters mean having to pack more content into each week - this means it is	5/11/2019 3:55 PM

	much harder to take everything in.	
65	Last assignment. Didn't know where to start according to the instruction and hints. And the tutorial class is cancelled due to holidays. Waste a lot of time construct a useless frame table which has already been provided.	5/11/2019 3:50 PM
66	Tutorials were just answers to tutorial questions where discussion/working often wasn't necessary	5/10/2019 6:17 PM
67	Can be a little dry, jargon-heavy.	5/10/2019 6:06 PM
68	The assignments while great, aren't really tailored to being group assignments so I found that usually, I would end up doing most of the work because I was more familiar with the existing implementation	5/10/2019 5:17 PM
69	trimesters making us have less time to understand and appreciate this course	5/10/2019 5:13 PM
70	Piazza	5/10/2019 2:35 PM
71	a little bit hard	5/10/2019 2:12 PM
72	Did not have a 2 hour lab per week, would have helped with assignment implementation	5/10/2019 12:32 PM
73	Course did not feel well adapted to trimesters.	5/10/2019 11:29 AM
74	The pace with trimesters	5/10/2019 11:02 AM
75	Sometimes the slides were lacking information discussed in lectures, so lectures had to be rewatched - this is probably the general intention (for the slides to be a summary), but some of the graphical slides didn't have any summary later	5/10/2019 10:53 AM
76	no labs so hard to understand some assignment content code-wise	5/10/2019 2:12 AM
77	VM was too rushed to understand all the concepts thoroughly	5/10/2019 1:34 AM
78	Sometimes a bit difficult to get more in depth information on the more finer details on some things. E.g more nuanced considerations in regards to implementation	5/9/2019 9:39 PM
79	Material is scattered to too many places e.g. wiki, lecture slides, cse site, help on piazza. at least combine wiki and cse site info	5/9/2019 3:44 PM
80	The workload is high (not necessarily bad) and there is a lot of content in lectures.	5/9/2019 2:54 PM
81	Lecture notes would benefit from being a bit more complete	5/9/2019 2:29 PM
82	THERE IS A LOT OF CONCEPTS TO STUDY! Not a lot of practice paper questions	5/9/2019 11:14 AM
83	Trimester means the assignment is released before the relevant content is taught.	5/9/2019 10:59 AM
84	assignment was way too hard to digest	5/9/2019 1:54 AM
85	pointers in c	5/8/2019 11:39 PM
86	a lot of content that takes a lot of time to take in	5/8/2019 9:15 PM
87	nothing comes to mind	5/8/2019 8:50 PM
88	Lack of resources in terms of assisting with assignments	5/8/2019 7:49 PM
89	Getting in and dirty with os161 code at the beginning of syscall assignment was hard. I appreciate now why it was done but it was quite difficult trying to understand the numerous files all referencing each other in various directories at the time. Some support on how to navigate multiple files simultaneously or be able to see which types.h is being included in a file would have helped	5/8/2019 6:26 PM
90	No participation was encouraged. I did extended so didn't have tutorials, didn't really feel like a part of a learning community.	5/8/2019 6:20 PM
91	Studying for the exam feels like a lot of rote-learning	5/8/2019 4:49 PM
92	I would not say it is worst thing but I will mention where it can improve. 1. Not familiar with how Piazza works at the beginning. When I first created account, it lead me to the resources page. So I had no idea how people are posting their question but all you need to do was go into 'Q&A' tab. 2. For GDB, I did not know -w option. I've used gdb in other course, it had 'run' command to run from beginning which we cant in this sys161 because it is running remotely. I wish someone add this in wiki from the very beginning. I realised this when I was searching on piazza forum for Assignment 3. 3. Many times, I get lost when Kevin tries to explain with extra contents other than what was written in lecture. I like to hear those but I was not really familiar with some concepts which makes me sometimes really hard to get what lecture content is leading. (By the way this is really personal opinion who had almost zero concepts how OS runs before so, for most people it might be fine)	5/8/2019 4:31 PM
93	trimesters made it hard to learn, the content would be easier to understand if it was marinated over a longer period.	5/8/2019 2:42 PM

ASSTO had a gdb tutorial???

**Too little time for more practical content. I'm glad the VM assignment seems to achieve the goal of providing practical understanding.**

94	I think that the course should have more practical content. The final exam is weighted 60% for something which questions your ability to read large amount of content and understand it. Personally I read the memory management chapter 4 times but its only after seeing the OS161 code that I got concepts. Also the same for processes. Maybe for students with prior OS knowledge this is a good medium but for myself practical = knowledge acquisiton.	5/8/2019 1:56 PM
95	course content need to be adjusted for the trimester	5/8/2019 11:19 AM
96	too many assignments	5/8/2019 5:42 AM
97	Nothing much, difficult to determine workload with trimesters, especially with the possibility of multiple large projects being due at the same time for many courses	5/7/2019 10:59 PM
98	Extreme quantity of content, especially with trimesters	5/7/2019 9:07 PM
99	Lack of proper tutorials for Extended OS. I felt like I was not getting the same learning experience as base OS students and wish I picked base OS instead.	5/7/2019 8:35 PM
100	Trimester	5/7/2019 7:56 PM
101	Not knowing how to begin assignments	5/7/2019 7:54 PM
102	The tutorials were useless	5/7/2019 7:26 PM
103	Few day to familiar with this operating system	5/7/2019 6:15 PM
104	Notifications on assignment. Better to have email notifications. Nitpicking tho	5/7/2019 4:54 PM
105	I personally struggled with the more difficult topics in the course, especially towards the end (virtual memory was somewhat hard to grasp, even with the assignment).	5/7/2019 4:21 PM
106	Too much content	5/7/2019 4:15 PM
107	Too much to memorise	5/7/2019 3:58 PM
108	The last two assignments are a bit hard for me and I think I need more help in the assignments. Also, I think it is better to have a summary notes for the lecture slides.	5/7/2019 3:55 PM
109	The second assignment is very (too) difficult. I am biased because I was quite sick during the assignment and don't know C very well. However, I still thought it way too much to comprehend in such a short timespan. The relevant code to understand and read was long. Plus, there was a huge amount of time where you didn't even touch the code (i.e. designing and thinking) and it felt like no progress was made.	5/7/2019 3:48 PM
110	Sometimes confusing as to where to start in the assignments	5/7/2019 3:32 PM
111	Overall felt rushed - little to no downtime between assignments to digest lecture material before applying it	5/7/2019 2:34 PM
112	The tutor speaks too fast...	5/7/2019 12:56 PM
113	There was a lot of content, some of which I found very difficult to make effective study notes on	5/7/2019 12:19 PM
114	The long assignments.	5/7/2019 11:25 AM
115	the slightly cramped timing between assignments due to trimesters, most courses now have assessments due at the same time	5/7/2019 10:54 AM
116	Too little time in-between assignments, or too many assignments. It was really draining towards the second half of the term with no midsem break and a shorter time to complete the assignments than previous years	5/7/2019 10:50 AM
117	Lack of practical exercises	5/7/2019 10:02 AM
118	Debugging virtual memory	5/7/2019 5:18 AM
119	Hard content, assignment and exam	5/7/2019 3:15 AM
120	Kevin just needs to speak a little bit faster, maybe can shorten each lecture by 10-15 minutes, or even teach more contents	5/7/2019 1:58 AM
121	lack of clear instruction for assignment - too much effort was often required for figuring out what the assignment actually wants us to do	5/7/2019 12:41 AM
122	steep learning curve, harsh marking for finals	5/6/2019 11:36 PM
123	The assignments were very hard. But I think this is also a good thing because it forces you to learn a lot. Thank god for the walkthrough videos	5/6/2019 11:33 PM
124	TO MUCH FOR 10 WEEKS	5/6/2019 11:11 PM
125	N/A	5/6/2019 11:10 PM
126	With the introduction of trimesters, it felt like there was a lot of content at times	5/6/2019 10:42 PM
127	Content heavy. Whilst I enjoyed it, there's a lot that goes on especially given the	5/6/2019 10:28 PM



## 10 week structure

128	The exam	5/6/2019 10:22 PM
129	Tutorials didn't have enough time to cover content properly.	5/6/2019 10:22 PM
130	The last assignment required a good understanding of which functions were calling each other and when (as most assignments do). However, understanding the flow of these function calls (the context) took quite some time. Unless this was intended, it would be nice if documentation for OS161's general design and flow of function calls in relevant scenarios was provided for us. This would save us a great deal of time, and allow us to focus on designing and implementing the components we're tasked to complete, rather than spend alot of time trying to understand what each function is responsible for because we don't know how it's used/called and when.	5/6/2019 10:01 PM
131	I found it unsatisfying how you never really feel like you understand how it works. With ASST2, I thought I'd finally understand how the read system call works, but you just end up calling VOP_READ, which does the work for you, and you're not really any closer to knowing how it works.	5/6/2019 9:50 PM
132	1. should have more flexibility with assignment groups, both in numbers, and ability to choose new partners each time 2. could've had some form of consistent assessment separate from assignments, even if they were just straightforward multiple choice quizzes on the content worth 2% of the class mark each.	5/6/2019 8:52 PM
133	Lack of time - I think things felt a little rushed and we were given a little more hand-holding during the assessments just because we were on time constraints. I definitely think having less guidance is painful but benefits reaped from it when we are able to come to solutions ourselves is much more rewarding. However I don't think this is necessarily a fault of the staff, but moreso that there's just less time in trimesters so it was a trade off that needed to be made in order for students to complete the assignments. Probably more critical to change in trimesters than the course itself but regardless I do think the transition to trimesters was handled pretty well.	5/6/2019 8:34 PM
134	guess it's having to remember a lot, also being thrown into the deep end for assignments	5/6/2019 7:25 PM
135	The lecture slides are often useless outside of the context of the lecture itself, which is fair since that's their purpose, but I like using slides to revise since the textbook is too dense.	5/6/2019 5:48 PM
136	no labs	5/6/2019 4:54 PM
137	The assignments/length of the lectures	5/6/2019 4:27 PM
138	A lot of content for Trimesters	5/6/2019 4:17 PM
139	Very content heavy and topics are often quite dry. I found it difficult to stay focused during lectures, and there was a lot of information that needed to be processed.	5/6/2019 4:02 PM
140	Assignments were very difficult - however I think this is mainly due to external factors, not the course itself. Trimesters means an increased density of assignments and this meant I had less time to focus on OS. This led to sleepless nights and mental exhaustion across all subjects.	5/6/2019 3:59 PM
141	Challenge assignment mark do not give extra mark in final grade... And in asst3, the frame table is provided. Write it by ourselves is easier to understand the course content.	5/6/2019 3:12 PM
142	Tutor was bad at engaging, so tutorials quickly became quite useless	5/6/2019 2:16 PM
143	Course was really well done. If I am nitpicking I think the slides are not super useful outside of watching the lectures. It isn't their purpose to be notes of course but a few more lines of text would be preferable.	5/6/2019 2:06 PM
144	Due to trimesters I felt the contents were rushed through and we did not have time to breathe or let the content sink in. Rather than rushing through, I would have hoped to cover less contents but understand them thoroughly	5/6/2019 2:03 PM
145	To be honest, the content of the course is pretty much the same as ops-class. And personally I prefer that course style.	5/6/2019 1:54 PM
146	Materials are too dry.	5/6/2019 1:48 PM
147	The practical side of the course (assignments) were much too hard for a course without dedicated labs for assignment help.	5/6/2019 1:48 PM
148	Terrible group member. Seems cannot work in group. I did all of the work. The other member did nothing. I think we had same expectation on the outcome, but mine rely on my hard work, and so did his/her, totally rely on my hard work.	5/6/2019 1:42 PM
149	Partner work, and sometimes implementation of assignment's are not the most clear	5/6/2019 1:28 PM
150	I feel like I needed more support when I encountered problems in the	5/6/2019 12:53 PM

assignments. I went to a few of the consultation sessions but there were often a lot of people there and it was hard to have my individual questions addressed, sometimes I didn't know the right questions to ask which would leave Alex, understandably, confused. Sometimes I felt like I could have used more direction when completing the assignments.

151	The very last topic was boring compared to the rest.	5/6/2019 12:46 PM
152	The fact that trimesters exist which isn't so much about the course, but assignments were released prior to actually going through the content at some points so you didn't get to start till a week later.	5/6/2019 12:46 PM
153	little time for tutorials	5/6/2019 12:17 PM
154	The OS161 setup made me cry week0. Other than that, the assignments seemed to sacrifice real world OS rationale for coding ease or assessability. It'd be cooler to have assignments geared more toward how real OSs work. Also, some quizzes throughout the term would really help to check my theoretical knowledge, as atm I feel very scared for the final exam having never really been tested on my theoretical knowledge so far.	5/6/2019 12:15 PM
155	Assignment walkthrough is bad <i>- how?</i>	5/6/2019 12:10 PM
156	Nothing	5/6/2019 12:09 PM
157	Bonus is still 7 days.	5/6/2019 12:00 PM
158	A lot of content, especially in the minimal weeks. Wish there was no new content in the last week/week and a half	5/6/2019 11:54 AM
159	Amount of assessments. Everything felt a little rushed because of the 10 week constraint.	5/6/2019 11:50 AM
160	Very detail and a lot of content (but it definitely is important)	5/6/2019 11:48 AM
161	I thought the assignments were good but could've been harder and more interesting	5/6/2019 11:41 AM
162	Ass1 (synchronisation assignment) was pretty much copying off lecture slides. At least one more difficult questions would of been good.	5/6/2019 11:26 AM
163	Course website is hard to navigate. Ie information about setup is spread between wiki, asst0, and gdb areas	5/6/2019 11:25 AM
164	Tutorials did not have sufficient time some weeks to cover proposed content.	5/6/2019 10:49 AM
165	Consultation hours were not very helpful, due to the fact that the many students that would attend would be at varying levels of completion on the assignment. This made it difficult for Alex to address everyone's issues properly and give everyone equal attention. I understand that piazza is supposed to help with this problem, but I often find that speaking to someone about my code out loud and in person is much more helpful than online communication.	5/6/2019 10:44 AM
166	The amount of time spent working on and debugging the assignments.	5/6/2019 10:40 AM
167	Assignments weren't very clear	5/6/2019 10:26 AM
168	Sometimes the content was a bit difficult to understand. I think lecture slides with more words and more textbook-based would be helpful so we can read that when we're having trouble.	5/6/2019 10:22 AM
169	I thought that having an assessment (asst0) in week 0/week 1 was difficult to complete in terms of timing, considering we had other subjects to settle into. However, I did find it paid off in later assessments.	5/6/2019 10:21 AM
170	How much stuff you need to learn	5/6/2019 10:00 AM
171	The assignments were very challenging and i thought more could have been done to help with the technical components	5/6/2019 9:49 AM
172	The difficulty of the assignments ramped up exponentially which caught me by surprise. The last assignment was difficult for me to complete.	5/6/2019 9:42 AM
173	Working in groups for the assignments. It's hard to find a student who is at the same level as you are, and this makes working together much harder.	5/6/2019 9:40 AM
174	Assignment 3 seems a bit hard without more instructions that leads students who is not talented in os to move forward.	5/6/2019 9:33 AM
175	The shorter term did make learning quite difficult.	5/6/2019 9:31 AM
176	Too much information to remember	5/6/2019 9:24 AM
177	Assignments are hard	5/6/2019 9:10 AM
178	Starting the assignments were an insanely hard task, it would be nice if we were provided some function headers or some general direction as to where to begin writing code e.g the file name we should start in	5/6/2019 9:07 AM
179	Asst3 was too unclear. Spent a long time trying to understand and eventually got there. Some more time spent on regions/offsets could help.	5/6/2019 8:45 AM

I did think it was too easy also. I'll replace one component with something not so obvious next year

180	A lot of content crammed into 10 weeks due to trimesters	5/6/2019 8:20 AM
181	Lack of depth in assign 1	5/6/2019 8:04 AM
182	The assignments, especially asst two having content taught 1-2 weeks before it was due, made the course feel rushed	5/6/2019 8:02 AM
183	One of the things is the last tutorial is suppose to cover the last topics and my tutorial didn't manage to cover it because the lecture haven't gone through them yet. Probably release the questions for the tutorial earlier so my tutor can go through them with us.	5/6/2019 7:44 AM
184	More information/resources could have been provided to explain advanced assignments. This is particularly for assignment 3 as for assignment 2 the man pages offered a sufficient explanation. A similar resource for the advanced assignment 3 questions would have been very useful.	5/6/2019 3:35 AM
185	When initially trying to understand the starting codebase, I felt a little overwhelmed.	5/6/2019 2:28 AM
186	Too many assignments in 10 weeks	5/6/2019 2:25 AM
187	The assignments. Their is a meme about university courses where the image portrays how to draw an owl and it be draw circles to the owls figure then next step would be draw the rest of the owl. 0-100	5/6/2019 2:23 AM
188	(a) I had a terrible group partner, and (b) the sample exams have that 1531 feeling where the multiple choice questions are either subjective or need a lot more context.	5/6/2019 2:18 AM
189	Could have used more assistance on the implementation side - e.g. a clear example syscall that was of higher complexity than those provided. For someone whose C was quite rusty, programming was a challenge.	5/6/2019 1:58 AM
190	I didn't really know where some of the lecture topics were going or what the point of a particular approach was until quite a while later which meant my notes ended up scattered and incoherent. This course is information dense and, while I feel like I have a good fundamental understanding of the content, I feel a bit uneasy heading into the exam as I can't really judge what is important to memorise (i.e. ext2 specifics or the justification for a particular free-space algorithm - things that would be trivial given simple prompts and enough time).	5/6/2019 1:46 AM
191	Assignment instructions (perhaps where to start) could be clearer - but if that's designed to be part of the challenge and indeed reality of coding, then disregard this criticism	5/6/2019 1:38 AM
192	Very fast	5/6/2019 1:27 AM
193	Tutorials are too short. We only go through about 25-40% of the tutorial questions max. Perhaps a 1:30hr tutorial?	5/6/2019 1:20 AM
194	- N/A	5/6/2019 1:07 AM
195	Tutorials	5/6/2019 1:01 AM
196	11 weeks worth of content, in a 10 week period	5/6/2019 12:53 AM
197	it can be quite challenging sometimes	5/6/2019 12:50 AM
198	A lot of work but nothing worth doing is ever easy (except asst0)	5/6/2019 12:50 AM
199	Lecture slides seemed quite sparse in regards to text, I understand the point of lectures is to give more depth. However, reading through the lecture notes made it hard to glean any substantial information.	5/6/2019 12:49 AM
200	Cant think of anything! Oh ya, at least few lectures should be in the evening so that people who work full ttime can attend	5/6/2019 12:49 AM
201	The assignment tutorial should match the ext lecture, otherwise feel ext os people always have a head start compared to standard os people.	5/6/2019 12:47 AM
202	Assignment is too difficult. Especially the attempt to understand the source code is too difficult. In addition, too difficult to debug.	5/6/2019 12:44 AM
203	A lot of lecture content to consume	5/6/2019 12:31 AM
204	Not really anything very bad, but if the tutorial problems can be improved a bit more which helps us to get started on the assignment faster then will be great.	5/6/2019 12:26 AM
205	Lecture too boring	5/6/2019 12:19 AM
206	The time it takes to do the assignments. This would probably be better if ASST0 was combined with ASST1 and all the assignments were given out and due 1 week earlier.	5/6/2019 12:16 AM
207	The assignments were pretty hard	5/6/2019 12:13 AM
208	Outdated and boring content at times	5/6/2019 12:12 AM
209	Seemed a little easier due to trimesters, expected it to be a bigger challenge,	5/6/2019 12:10 AM

	limited timing between assignments	
210	Assignments, not that the assignments themselves were "bad", but we got relatively little time to grasp the concepts so that we could apply them. This was especially true with Assignments 2 and more so with Asst3.	5/6/2019 12:09 AM
211	I found the course, especially the assignments harder than I expected. But that's in no way a bad thing about the course.	5/6/2019 12:08 AM
212	Too much content, especially with lectures in Week 11. Too much to study and not enough time.	5/6/2019 12:06 AM
213	The significantly varying difficulty of the assignments, eg. assignment 2 was the hardest by far.	5/6/2019 12:05 AM
214	Tutor wasn't good	5/5/2019 11:58 PM
215	Hard to say, I have very limited time on lecture slide.....due to trimester things maybe	5/5/2019 11:57 PM
216	Cannot tell	5/5/2019 11:57 PM
217	From my perspective, none.	5/5/2019 11:56 PM
218	Frame table shouldn't be taken away from assn3. And why class marks only weight 40% in harmonic mean :(	5/5/2019 11:55 PM
219	Moreso trimesters the relative workload felt rushed	5/5/2019 11:53 PM
220	Honestly, it just wasn't long enough. I really wish this course could become two where we continue along in the same format for another semester / term with 3 more assignments. My understanding is that advanced is more of an impromptu course featuring guest lecturers, and has a really small number of students. I don't mean with regards to trimesters vs semesters, I'm just really disappointed that it's come to an end. This course is the most interesting, I've done while at uni, and it's made me less excited for the rest of the year, knowing that the next few courses I take won't be covering the same topics. I'm still undecided as to whether I should take advanced or not, but I guess that would be the next thing to look into.	5/5/2019 11:53 PM
221	A lot of the learning through (painful) experiences was taken out (for good reason). Nothing you could have really done about that though.	5/5/2019 11:53 PM
222	The assignment schedule is a bit too tight for Trimester.	5/5/2019 11:53 PM
223	Probably having to log into the wiki. Most of the rest of UNSW is single sign on but the wiki isn't, meaning I had to enter my password each time. You know the course is good when this is the worst thing I can think of lol	5/5/2019 11:52 PM
224	No commented sample solutions given after assignment is ended	5/5/2019 11:52 PM
225	During the assignments it took a long time to grasp what we had to do- for me personally this meant that I had no chance to attempt the advanced components even though they seemed like great learning exercises.	5/5/2019 11:52 PM
226	assignment 2, I wish there had been more direction/guidance in the assignment spec.	5/5/2019 11:51 PM
227	The assignment 's code	5/5/2019 11:46 PM
228	The assignments are pretty hard. I'm scared for the finals. But these aren't really bad things.	5/5/2019 11:45 PM
229	I felt that assignment two didn't give enough background on how to implement what we needed to implement. Perhaps that's just because OS assignments are harder. Additionally, some of the lecture content was covered sufficiently in 1521 and thus was superfluous. Neither of these criticisms are really that bad, which I hope demonstrates how much I enjoyed the course.	5/5/2019 11:44 PM
230	Wish there were better notes for studying	5/5/2019 11:43 PM
231	sometimes its confusing what happening in os161 code and is sometimes difficult to debug.	5/5/2019 11:43 PM
232	Debugging in assignments was incredibly difficult	5/5/2019 11:42 PM
233	Asst3 is too difficult for me and my teammate.	5/5/2019 11:41 PM
234	Trimesters	5/5/2019 11:37 PM
235	Trimesters made everything rushed (quite content heavy course)	5/5/2019 11:36 PM
236	Debugging in os161	5/5/2019 11:35 PM
237	need to understand the ugly and messy side of the operating system , debugging is primitive	5/5/2019 11:35 PM
238	Probably the ambiguity regarding what's expected for the final exam. Although the content is great and useful -- because there's so much (and a lot of it is very specific to certain architectures), I found myself not really knowing how to study	5/5/2019 11:35 PM

efficiently for the exam. It was (is) pretty stressful trying to remember the specifics of everything, especially with less study time in trimesters.

239	The content was a tad overwhelming and difficult. It would have been nice to have more weekly things to revise, that's not just tutorials. For example, maybe a weekly test?	5/5/2019 11:35 PM
240	the concepts are too abstract to me	5/5/2019 11:34 PM
241	Assignment 3	5/5/2019 11:34 PM
242	I felt like we were thrown into the deep end with the assignments. It all eventually made sense after reading through the spec several times and scanning through as many piazza comments as possible. Maybe some more hints on how/where to start would have been useful.	5/5/2019 11:34 PM
243	Late marking	5/5/2019 11:33 PM
244	Lecture slides are not that clear for me.	5/5/2019 11:33 PM
245	content was very rushed	5/5/2019 11:32 PM
246	i wish the basic part of the assignment required some part of the advanced section. I think the later assignments were too "empty" compared to last year	5/5/2019 11:32 PM
247	Trimester and no enough time to go deeper to the advanced part of assignment, also review	5/5/2019 11:32 PM
248	It's not really bad, but the last assignment was a little hard to manage since it was due at the very end of the term especially since it was the hardest to implement out of all the assignments. This could be because of the 10-week adjustments though.	5/5/2019 11:32 PM
249	There was a strong disconnect between the delivery of lecture theory and practical application. It's there in the assignments, but it's not nearly as strong as other comp courses I've done.	5/5/2019 11:32 PM
250	having no idea how to start assignments.	5/5/2019 11:31 PM
251	Assignments did not feel too rewarding to do i.e. more time was spent debugging minor code issues rather than working out the logic behind the os	5/5/2019 11:31 PM
252	Assignment is too hard haha	5/5/2019 11:31 PM
253	Many questions in tutorials aren't really grounded in things you can find out from looking through lecture slides	5/5/2019 11:30 PM
254	there is a lot of info to take in (in a short amount of time now due to trimesters)	5/5/2019 11:29 PM
255	Pacing of the content and timing in relation to assignments	5/5/2019 11:29 PM
256	Setup of home computing	5/5/2019 11:28 PM
257	It was tough but that's a good thing	5/5/2019 11:28 PM

**The most significant issue mentioned seems to be trimesters.**

**FYI: For 2019. I reduced the lecture content, reduced the scope of the assignments, provided more support material, and largely preserved the amount of time available to do each assignment (compared to previous years, there were less breaks and a faster start).**

**I do hear you on the need for further tuning. My aim at the start of trimester was teach the first 9 weeks of 10, leaving week 10 for last tutorial and assignment work. I think I'll try harder to succeed for 2020.**

Q7 Did you get the impression that the staff (lecturer, tutors, consultants) tried their best to answer your questions and help you? Please tick N/A if you did not attend lecture, consults, tutes)

Answered: 304 Skipped: 9

	<b>STRONGLY AGREE</b>	<b>(NO LABEL)</b>	<b>NEUTRAL</b>	<b>(NO LABEL)</b>	<b>STRONGLY DISAGREE</b>	<b>N/A</b>	<b>TOTAL</b>	<b>WEIGHTED AVERAGE</b>
Lectures	67.76% 206	20.07% 61	3.29% 10	0.33% 1	0.33% 1	8.22% 25	304	4.68
Tutorials	57.24% 174	22.37% 68	6.58% 20	2.30% 7	0.99% 3	10.53% 32	304	4.48
Consultations	26.64% 81	6.91% 21	7.89% 24	0.00% 0	0.33% 1	58.22% 177	304	4.43

Similar to past years

## Q8 How does the quality/value of this course compare to other....

Answered: 304 Skipped: 9

	AMONG THE BEST	(NO LABEL)	AVERAGE	(NO LABEL)	AMONG THE WORST	TOTAL	WEIGHTED AVERAGE
Year 3 and postgrad COMP courses	60.86% 185	26.32% 80	11.51% 35	0.99% 3	0.33% 1	304	4.46
COMP courses in general	60.20% 183	26.97% 82	11.18% 34	1.64% 5	0.00% 0	304	4.46
Courses in general	62.17% 189	25.33% 77	11.18% 34	1.32% 4	0.00% 0	304	4.48

2016 was around 70% "Among the best", so a little dip. It's hard to conclusively understand why as it could be a trimester-related dip which itself could be first time trimester experience or workload expectations applying more pressure than previously. Still, overall, not a huge concern.

**Q9 Given the material covered in the course, please rate how helpful the following components/resources were in understanding the material.**

Answered: 304 Skipped: 9

	<b>VERY HELPFUL</b>	<b>HELPFUL</b>	<b>NEITHER HELPFUL OR UNHELPFUL</b>	<b>UNHELPFUL</b>	<b>N/A</b>	<b>TOTAL</b>	<b>WEIGHTED AVERAGE</b>
Lectures	60.53% 184	29.93% 91	3.95% 12	0.99% 3	4.61% 14	304	3.57
Lecture video captures	75.00% 228	19.41% 59	2.63% 8	0.33% 1	2.63% 8	304	3.74
Tutorials	38.49% 117	39.47% 120	11.18% 34	1.32% 4	9.54% 29	304	3.27
Tutorial questions	38.16% 116	46.38% 141	8.88% 27	0.99% 3	5.59% 17	304	3.29
Assignments	53.29% 162	35.53% 108	8.22% 25	2.96% 9	0.00% 0	304	3.39
Sample exam questions	51.64% 157	30.59% 93	4.28% 13	1.32% 4	12.17% 37	304	3.51
Textbook	17.43% 53	21.05% 64	13.16% 40	2.96% 9	45.39% 138	304	2.97
Other resources on the Internet	27.96% 85	40.13% 122	14.80% 45	2.96% 9	14.14% 43	304	3.08

**In 2016, the assignments were around 66% "very helpful". So the assignments have dipped while everything else is similar. This could be a few factors. The workload, despite having very similar time available for less ambitious assignments, or the large cohort where the assumed knowledge for the course is not always as assumed. Maybe later in the survey will reveal more.**



## Q10 Is the current mode of lecture delivery, using computer-projected slides, effective?

Answered: 304 Skipped: 9

ANSWER CHOICES	RESPONSES	
Yes	96.05%	292
No	3.95%	12
TOTAL		304

**Similar to previous years.**

Q11 Was the subject material (lecture notes, information on the subject web page, textbook, tutorials, manuals, etc.) sufficient to follow the course?

Answered: 304 Skipped: 9

ANSWER CHOICES	RESPONSES	
Always	46.05%	140
Usually	48.36%	147
Sometimes	4.93%	15
Rarely	0.66%	2
Never	0.00%	0
TOTAL		304

"Always" is a little higher this year (36% 2016).

## Q12 Did the explanations in the lecture help you to understand the subject material?

Answered: 304 Skipped: 9

ANSWER CHOICES	RESPONSES	
Always	51.32%	156
Usually	41.12%	125
Sometimes	5.92%	18
Rarely	1.64%	5
Never	0.00%	0
TOTAL		304

"Always" was 33% in 2016, so another increase. I'll conclude from this that trimesters do not need any more support to understand the subject material.

Q13 Tick any statement below that is true for you in regard to lecture attendance and the lecture videos (you can tick more than one).

Answered: 304 Skipped: 9

ANSWER CHOICES	RESPONSES	
I did not use videos	3.29%	10
I had a clashing timetable, and used the video to regularly catch up.	19.74%	60
<b>I nearly always used the videos and skipped the lectures.</b>	<b>50.33%</b>	153
I generally attended lectures, but I FREQUENTLY used the videos replay material I did not understand in the lecture.	23.36%	71
I generally attended lectures, but I OCCASIONALLY used the videos replay material I did not understand in the lecture.	17.11%	52
Total Respondents: 304		

The significant increase in lecture skipping is kinda sad. From 20% 2016 to 50% in 2019. I counted the attendance in the last lecture (where traditionally I dropped hints about the exam) and the attendance was < 10% of the course. It's becoming harder to get motivated to lecture to largely empty lecture halls.

## Q14 Given your experience with echo360 lecture videos in other courses, how do you find the lecture videos that I produce?

Answered: 304 Skipped: 9

ANSWER CHOICES	RESPONSES	
Significantly better	60.86%	185
A little better	21.05%	64
Roughly the same	12.17%	37
Worse	0.99%	3
Other (please specify)	4.93%	15
TOTAL		304

#	OTHER (PLEASE SPECIFY)	DATE
1	Echo 360 has caught up in quality. But I like that you take out the mid lecture break, capture the ending of the lecture if you run over, and your videos from past years are still available online	5/15/2019 11:52 PM
2	N/A	5/15/2019 11:33 PM
3	The current structure is great (slides on the screen, voice recorded) however I was not able to watch the last 30-40mins of the video usually... For some reason, it would not load. I hope for next time, problems such as this will be checked better.	5/15/2019 1:37 PM
4	Significantly better compared to echo360 (much faster to access echo is a pain, video scrubbing is a lot better and helps a lot when reviewing)	5/14/2019 11:41 AM
5	Probably better than Echo360, but the video player is bad.	5/13/2019 2:35 PM
6	Better. Only lack fast forward function.	5/11/2019 3:55 PM
7	The lecture videos themselves are better in the sense that breaks and interruptions are edited out, but I miss echo360s ability to quickly fast forward/back a couple seconds using the arrow keys	5/8/2019 4:52 PM
8	I did not use videos	5/7/2019 4:00 PM
9	Better part: record the whole lecture, won't skip first, last 10 min. Worse part: in full screen mode, when I click on 'space' to stop the video, the video will exit the full screen mode but still playing. I have to click on the stop bottom using mouse before using keyboard control the video.	5/6/2019 3:18 PM
10	N/A	5/6/2019 9:45 AM
11	Upload slower	5/6/2019 12:24 AM
12	It's about the same, but I wish the software had an option to rewind/fast forward in small increments (ex: 10 sec) like echo360 has.	5/5/2019 11:54 PM
13	while(1) {printf("better than echo360\n");} I can't take notes when just listning. writing flash cards from the slides is great for rote. Jumping through the recordings with time-stamped slides: Writeing flashcards interleaved with context and understanding. I love it. Love it Love it.	5/5/2019 11:51 PM
14	Definitely faster and easier to use, but some core functionality is missing, its not easy to skip backwards with a key press or pause with space (unless u clicked on the pause/play button), which i took for granted with echo360.	5/5/2019 11:48 PM
15	it will be better to have subtitle	5/5/2019 11:34 PM

**In general, there is a preference for my video over echo360, the difference is slowly decreasing.**

**Regarding issues watching. Strongly suspect it's at your end. The video is hosted on a server with high bandwidth connection to internet that is unlikely to saturate the link. That said, the video is 720p, maybe some connection can't handle it. (In which case you could download and watch offline?)**

## Q15 Lecture attendance was significantly lower this year than previous years. What were you reasons for not attending (tick all that apply).

Answered: 304 Skipped: 9

ANSWER CHOICES	RESPONSES
Lecture videos are sufficient to follow.	47.04% 143
The lecturing style translates well to video recording.	41.12% 125
I had a timetable clash.	15.79% 48
The workload with 10-week semesters left little time for lecture attendance.	45.39% 138
I work full/part-time.	33.22% 101
The lectures are too fast given my background knowledge.	15.46% 47
The lectures are too slow.	7.89% 24
The lecture theatre is too big to interact with the lecturer.	8.22% 25
Other (please specify)	25.33% 77
Total Respondents: 304	

#	OTHER (PLEASE SPECIFY)	DATE
1	I attend lectures (mostly)	5/17/2019 12:47 AM
2	I live 1.5 hours away and try to organise my timetable to only attend all tutorials on the same day to save time.	5/16/2019 9:31 PM
3	dont really have enough time to both watch the lecture and go over it again in recording if you didnt undertand a section.	5/16/2019 3:24 PM
4	I find that tutorials point video on youtube explanation style is quite good. If the lecturer would provide a clear motive of what is 'today's session' about and repeat and make clear words said and probably constant reminder for students to 'look here', it'll be great to reference and keep focus even when watching lecture videos.	5/15/2019 11:39 PM
5	The Lecture was the only class I had on Monday and it takes me 1.5hours to get to uni so I felt the 3 hour travel time to and from uni was a waste	5/15/2019 11:13 PM
6	Spending 2 hours on public transport for a 2 hour lecture and nothing else isn't worth it.	5/14/2019 4:52 PM
7	I generally tried to attend because Kevin would interact with students and answer questions which I found very useful.	5/14/2019 1:13 PM
8	I generally learn better by watching lecture videos.	5/14/2019 12:20 PM
9	Commute times, personal preference, speed multiplier on videos, can pause when confused	5/14/2019 11:41 AM
10	I attended all your lectures Kevin! And I loved every one!	5/13/2019 4:38 PM
11	Since I don't understand most of the concept most of the time in lecture. I would rather watch the recording so that I can rewind, repeat any time as I want	5/13/2019 2:07 PM
12	I attended all my lectures :)	5/13/2019 2:05 PM
13	I would have to travel to and from uni just for this 1 lecture. Time wise it is much more efficient to watch the video (and on higher speed)	5/13/2019 1:51 PM
14	Travel time to UNSW	5/11/2019 3:57 PM
15	The lectures were at times which were difficult to attend	5/10/2019 11:32 AM
16	I attended most lectures	5/9/2019 2:31 PM
17	i attended lectures	5/8/2019 11:47 PM
18	with lecture videos/slides, i can pause/stop at anytime if i dont understand something	5/8/2019 9:18 PM
19	Dont have time to sink in the knowledge in trimesters. Making it difficult to follow up the pace in the later weeks. Might as well listen to recording in my own pace.	5/7/2019 7:59 PM
20	I live far away	5/7/2019 7:56 PM

21	I'm working four days a week	5/7/2019 4:55 PM
22	I find it difficult to remain seated, silent, and concentrated for prolonged periods of time. Trimesters have also drained life much faster. :(	5/7/2019 4:23 PM
23	The lectures weren't too fast per say, but assumed knowledge I sometimes did not have and used words I had yet to fully grasp.	5/7/2019 3:51 PM
24	Lecture times were super inconvenient	5/7/2019 2:35 PM
25	I was sick this term and there was no midsem break to help me get better and catch up	5/7/2019 10:52 AM
26	Sometimes we had to deal with projects, assignments and exams, and hard to follow the next lecture if missing one.	5/7/2019 3:21 AM
27	I attended most of the lectures	5/6/2019 11:15 PM
28	I don't go to lectures normally	5/6/2019 10:24 PM
29	I'm too lazy to attend lectures, and I'm fairly confident with my past knowledge	5/6/2019 10:18 PM
30	The ability to pause and rewind with lecture videos solves my issue of being "lost" whenever I miss a few important words in the lecture. I lose the context, and often find the following topics difficult to understand simply because I missed a few important words earlier. Also, watching lecture videos online saves me from having to travel 3 hours on those days.	5/6/2019 10:11 PM
31	I have a specific timespan that I can concentrate. Lecture videos allow me to choose how long I spend at a time.	5/6/2019 8:56 PM
32	Commute time to UNSW was way too long to justify going to attend a 2 hour lecture	5/6/2019 8:36 PM
33	lectures only run at later times	5/6/2019 7:27 PM
34	Sometimes I like speeding up lecture recordings to save time	5/6/2019 5:50 PM
35	Lectures too slow in the sense of speed of speaking, not pacing of content. Not an issue with the lecturer - watching videos at a higher speed at convenience and saving travel time will always be more efficient.	5/6/2019 4:09 PM
36	One lecture per day for my timetable while 3 hours spend in bus	5/6/2019 3:18 PM
37	I generally prefer web lecture so I can learn at my own time and pace without having to match the lecturer's pace	5/6/2019 2:05 PM
38	I did attend all the lectures.	5/6/2019 12:47 PM
39	I live almost 2 hrs away from uni :)	5/6/2019 12:17 PM
40	I attend most lectures but the ones i missed was because I had a lot of assignments to do.	5/6/2019 11:50 AM
41	I'm used to listening to lectures at 2x speed	5/6/2019 11:41 AM
42	N/A (Attended all but one or two due to over sleeping)	5/6/2019 11:33 AM
43	I attended most lectures.	5/6/2019 10:50 AM
44	I find it easier to watch lectures because I can do it during transport time and also pause and refer to textbook etc when I'm confused.	5/6/2019 10:26 AM
45	I went to the lectures	5/6/2019 10:22 AM
46	I attend lectures	5/6/2019 9:45 AM
47	I live far away so only go to uni on days when I have a full days worth of tutorials/lectures	5/6/2019 9:42 AM
48	Uni is very far	5/6/2019 8:23 AM
49	If I missed a lecture due to unforeseen reasons, I didn't need to stress as the video recordings and Kevins lecturing style make it so easy to not miss any content.	5/6/2019 8:06 AM
50	If I'm struggling with a concept I prefer having the ability to pause the lecture to go and understand it/look at other resources before moving on.	5/6/2019 3:35 AM
51	I felt that the slides alone offered just as much as the lectures.	5/6/2019 2:22 AM
52	Lectures are paced well, but I can cover the content more easily at 1.5x speed given my time constraints.	5/6/2019 2:02 AM
53	Being able to pause to lookup a topic or write detailed notes saved time (as opposed to rewatching the entire lecture at home)	5/6/2019 1:51 AM
54	It is easier to follow, focus and concentrate with video recordings	5/6/2019 12:54 AM
55	My English is not good. The lecture speak a little fast. Attending a class, I cannot use this two hours efficiently due to language problem. I have to listen again and	5/6/2019 12:53 AM

	again at home.	
56	I'm lazy	5/6/2019 12:51 AM
57	I live too far, coming to the lecture will take too long.	5/6/2019 12:28 AM
58	The lecture times weren't very good for me.	5/6/2019 12:17 AM
59	I attended 90% of lectures	5/6/2019 12:12 AM
60	Don't know, I attended every time	5/6/2019 12:04 AM
61	Actually I attended, but I suppose UNSW 3+ could be a main reason	5/6/2019 12:00 AM
62	Travel	5/5/2019 11:57 PM
63	I had nothing else on Mondays / Fridays and coming to uni takes an hour each way at best.	5/5/2019 11:55 PM
64	I live about 2 hours a day and both lectures were scheduled on days with no other events	5/5/2019 11:55 PM
65	Trimesters ended my life	5/5/2019 11:54 PM
66	I did not feel comfortable attending lecture due to other students. I did not want to be distracted by other students talking to me during lecture.	5/5/2019 11:54 PM
67	I have a long commute and I only had the lecture on the two days that would otherwise be free.	5/5/2019 11:53 PM
68	I ADHD, turning out to be quite severe. This style of lecture painful to attend - the tangents that my brain go on, I can't indulge, and needing to stay in focus in real-time is... problematic. . A Richard Buckland-style lecture works for me very well, but i predict forcing that onte 3231 wouldn't go too well.	5/5/2019 11:51 PM
69	You can watch lectures at faster speed (1.5-2.0x speed) saving a lot of time, which was really helpful considering how horrible work balance and load is with trimesters	5/5/2019 11:46 PM
70	I attend all the lectures	5/5/2019 11:38 PM
71	It's easier to watch lectures at my own pace from home. Can pause and rewind when necessary to better understand content.	5/5/2019 11:37 PM
72	I prefer to learn off reading lecture slides, not from attending lectures	5/5/2019 11:35 PM
73	Disruptions around upper campus were often annoying, but I know that there's not much you can do about that	5/5/2019 11:35 PM
74	The speed in which Kevin talks is really slow, so I watch the recording in 1.5x speed to save a bit of time.	5/5/2019 11:35 PM
75	If you miss one thing at the start of the lecture, the rest of the lecture is a waste	5/5/2019 11:35 PM
76	online content was clearer for the later slides	5/5/2019 11:34 PM
77	I knew most of the content	5/5/2019 11:32 PM

**The usual observation that about 15% of the class think I go too fast, and a similar number think I go too slow. This seems about right.**

**The take away for me overall is that the videos are good enough that any barrier to lecture attendance (commute, work, workload) results in lecture skipping.**

**Again, this is a bit of a two-edge sword. The quality of lecture delivery will suffer (if it's not already) when I start lecturing to empty lecture theatres...**



## Q16 Any suggestions for improving lectures (including the lecture video captures)?

Answered: 142 Skipped: 171

#	RESPONSES	DATE
1	The lectures and the videos are very good	5/17/2019 2:16 PM
2	Some more notes (dot points) on lecture slides, more practical examples given	5/16/2019 9:09 PM
3	More examples in the lecture	5/16/2019 5:17 PM
4	in another course i had (COMP3411 artificial intelligence) they had smaller broken up by concept/topic section of the Lecture recordings from previous years up on the website for us to go through. this was particularly usefully as it allowed us to quickly go over a particular concept that we did not understand during in lecture. also allowed just to quickly go through concepts before the lecture in we wanted/had time.	5/16/2019 3:24 PM
5	video captures are difficult to navigate and performance is poor holy shit it takes forever to load and start watching somewhere in the middle also put like timestamps or something	5/16/2019 1:03 PM
6	They are awesome!	5/16/2019 11:37 AM
7	They were high quality	5/16/2019 11:30 AM
8	In lecture exercises to ensure we understand the presented info (e.g. lab style exercises, small questions posted etc.)	5/16/2019 8:49 AM
9	Already does point out important parts for assignments but making more emphasis would be very helpful with the amount of content this course covers	5/16/2019 8:18 AM
10	Also uploading lectures to YouTube	5/16/2019 12:38 AM
11	Video capture doesn't catch student questions. Repeating them (especially important ones) would help.	5/15/2019 11:52 PM
12	its good enough	5/15/2019 11:39 PM
13	N/A	5/15/2019 11:12 PM
14	Looks perfect for me.	5/15/2019 10:25 PM
15	Use echo360; echo360 has so many useful features these online lectures didn't, like: - Ability to download the lecture for offline viewing - Ability to control video quality (e.g. 1080p, 480p), which would be helpful for students with slow internet - Ability to show 2 screens at once (lecture slides on one, camera of lecturer on another) - Picks up where I left off in the video (e.g. if I'm up to 5:46 in the video and close the browser, then the next time I access that video it will start from 5:46) echo360 has tons of other features I don't even use but are nice to have (e.g. the bookmarks, questions, flag as confused, etc). Plus, unlike your lectures, echo360 doesn't require me to login with my zPass/email everytime I want to watch a lecture. TLDR; use echo360, it's good.	5/15/2019 8:12 PM
16	Probably not the most important but it would be nice to be able to skip a bit of time with the left and right arrow keys.	5/15/2019 5:57 PM
17	If it's possible, uploading the captures earlier	5/15/2019 4:49 PM
18	Written previously... I loved the lecture and the lecturer's teaching, however, I had playback issues at home. It could have been my network issue, but even when I reloaded they didn't work so I am not sure how to fix this.	5/15/2019 1:37 PM
19	Sometimes, the voice is not very clear	5/15/2019 11:47 AM
20	cut down on the courseload a bit more for 10 weeks. maybe some content that isn't applicable for today? segmentation?	5/14/2019 5:44 PM
21	The slide transitions or whatever is used to reveal content bit by bit on the same slide can sometimes mean that the final slide uploaded as PDF is not actually very useful. For example, pp 28 & 30 of Virtual Memory had 'stickers' obscuring content. This wasn't so bad because the content wasn't important. But there are other examples where the sticker obscured the formula for Amdahl's law or where the most important information was visible somewhere in the middle of the slide transitions and in the final state the slide was just blank or something. A very small gripe given the fact the lectures and slides were otherwise so good.	5/14/2019 1:13 PM
22	(Videos only) Its good as it is. Maybe small things like faster upload times or reiterating student's questions because we can't quite hear them.	5/14/2019 11:41 AM
23	No	5/13/2019 6:44 PM

24	-	5/13/2019 4:38 PM
25	Use a video player that enables keyboard seeking.	5/13/2019 2:35 PM
26	The classroom is too large to listen clearly.	5/13/2019 2:14 PM
27	No. Given the 10-week trimester, I think it is good.	5/13/2019 2:07 PM
28	For lecture video captures, maybe a "what's going to be covered"?	5/13/2019 2:05 PM
29	I found that the mic needs to be a bit louder. But was fine in the recordings	5/13/2019 2:03 PM
30	Sometime the mic was cutting out	5/13/2019 1:51 PM
31	Felt a bit stale at times, perhaps have some sort of interactive activity here and there	5/13/2019 1:32 PM
32	N/A. Probably the best recordings since they are pretty clear with no distortions or anything like that.	5/12/2019 10:28 PM
33	it was done really well!	5/12/2019 12:09 PM
34	Na	5/12/2019 10:45 AM
35	Sometimes audience questions hard to hear in the videos, but the lecture video captures were very useful.	5/11/2019 11:18 PM
36	not really they were fine	5/11/2019 10:17 PM
37	No - fantastic as they are.	5/11/2019 3:57 PM
38	fast forward function	5/11/2019 3:55 PM
39	I think the lectures in this course are among the best, I'm not too sure how they can be improved except perhaps to refrain from introducing/mentioning material that will be covered later on as this can be confusing in the beginning of the course and may persuade some students that they aren't knowledgeable enough to do the course	5/10/2019 5:21 PM
40	Better explained lecture slides but generally I consult the videos if the slides left confusion	5/10/2019 2:36 PM
41	Nope - done really well and allowed for questions :)	5/10/2019 10:56 AM
42	no problem with this aspect of the course	5/10/2019 2:16 AM
43	As noted previously, a bit more explanation in the slides would help with revision.	5/9/2019 2:31 PM
44	Are there any lectures during which Kevin's phone didn't go off?	5/9/2019 11:16 AM
45	no	5/8/2019 11:39 PM
46	not crazy about using lecture slides the whole time, e.g. i quite liked when Aleks breaks out of lecture slides in his algorithms classes to uses the board and go through a problem, felt more interactive	5/8/2019 9:02 PM
47	N/A	5/8/2019 7:50 PM
48	Allow fast forwarding and rewinding using the arrow keys - helps to quickly rewatch parts that I missed because I was daydreaming	5/8/2019 4:52 PM
49	I think that in person lectures should be supported by real life code examples. Like for example it would be cool to actually see a system call in action. Like starting for userland.c => mips_call.asm => syscall.c => wherever else etc.	5/8/2019 1:58 PM
50	workload a little bit high for trimester.	5/8/2019 11:22 AM
51	could teach some code part	5/8/2019 5:44 AM
52	Timestamps for sections covered so you can easily review content or find the relevant part	5/7/2019 11:03 PM
53	Written versions of student questions? Usually the lecturer repeats the question so not having this is okay.	5/7/2019 7:56 PM
54	Not particularly, the videos are excellent.	5/7/2019 4:23 PM
55	They are good as is	5/7/2019 3:34 PM
56	The way the lectures were structured made it difficult for me to make short notes. Perhaps there should be more clearly defined sub topics.	5/7/2019 12:22 PM
57	Can't think of anything.	5/7/2019 11:29 AM
58	upload a version of the slides which don't contain annotations please	5/7/2019 10:59 AM
59	I know it's sometimes not possible, but having the videos out on the same day the lecture was on was really helpful. Having more timely breaks	5/7/2019 10:52 AM
60	Run through some practical examples, rather than lecture slides.	5/7/2019 10:03 AM
61	Add lyrics	5/7/2019 3:21 AM

62	Kevin needs to speak a little bit faster, I often watch the lecture at 2 times speed for parts that I understand. For parts that I dont, I still speed up to 1.25	5/7/2019 2:00 AM
63	Main concern was lack of clear direction with assignments - I understand we cannot directly be told "do x then y then z", but assignments could be explained more clearly/succinctly - perhaps make a distinction next time what is general background knowledge, and what is actually needed in the assignment implementation	5/7/2019 12:44 AM
64	N/A	5/6/2019 11:15 PM
65	It would be good if it was possible to go a few seconds backwards or forwards in the videos just by pressing the left or right arrow keys.	5/6/2019 10:42 PM
66	Clearer explained slides	5/6/2019 10:24 PM
67	Perhaps separate lecture notes from lecture slides. Hard to follow if I'm trying to read the notes myself while listening to lecturer at the same time.	5/6/2019 10:24 PM
68	Sometimes Kev went into great detail, and I'm left wondering if I can sit back and try soak in the detail, or if I really need to focus and memorise this sort of stuff for the exam. I think people would learn more if they could just soak this high detail stuff in, rather than stressing about copying it down and memorising it etc. Maybe this could be specified...	5/6/2019 9:52 PM
69	Upload clean both clean and drawn-on versions of lecture slides.	5/6/2019 8:56 PM
70	No complaints here :) I could hear construction going on in the background (not to the point where I couldn't focus) so I imagine it would've been really loud and distracting in the actual lecture theatre, props to handling that well.	5/6/2019 8:36 PM
71	better if there are tutes for extended lecture want to see lecturer in video	5/6/2019 6:55 PM
72	None: they are fairly good as is	5/6/2019 5:50 PM
73	more coding examples	5/6/2019 4:56 PM
74	Limit the amount of extraneous (non-assessable) content, especially given new time constraints. Extra info is interesting, but not helpful to students that only want to do well in the course (unfortunate but true).	5/6/2019 4:09 PM
75	Better part: record the whole lecture, won't skip first, last 10 min. Worse part: in full screen mode, when I click on 'space' to stop the video, the video will exit the full screen mode but still playing. I have to click on the stop bottom using mouse before using keyboard control the video.	5/6/2019 3:18 PM
76	Not a suggestion, but absolutely love the feature where I can skip to which slides you're talking about. I think you should tell every other lecturer in the uni about that feature and teach them how to use it too :D	5/6/2019 2:18 PM
77	Perhaps incorporate actual coding walkthroughs for the assignments since there are no dedicated labs since just the theory provided alone makes it hard enough to code up the assignments	5/6/2019 1:50 PM
78	Please try to repeat the questions asked so that the video audience can understand the context of the response.	5/6/2019 12:55 PM
79	None.	5/6/2019 12:47 PM
80	n/a	5/6/2019 12:18 PM
81	nop	5/6/2019 12:17 PM
82	No	5/6/2019 12:12 PM
83	Hope there would be left and right arrow keys to skip 10 seconds	5/6/2019 12:03 PM
84	lecture capture were great, easy to download so I could watch at any speed, pause and watch offline	5/6/2019 11:55 AM
85	I found that I understood the concept of all the topics discussed. What I found difficult was translating into code. Perhaps more examples in coding might help get a start on how synchronisation, page tables and syscalls should be implemented.	5/6/2019 11:54 AM
86	With the lecture videos sometimes it was hard to find the start of a specific topic, as normally the lectures weren't split up into topic but rather into weeks. This makes it a bit harder to revise a specific topic. Perhaps the lectures could be split into topics as well as weeks	5/6/2019 11:45 AM
87	It was just really well done	5/6/2019 11:41 AM
88	Perhaps a video recording (such as John Shepard's lectures on YouTube) but really not important.	5/6/2019 11:33 AM
89	sometimes when a student asks a question, the question was not captured in the recording so the answer doesnt have context	5/6/2019 10:51 AM
90	There were times when I felt like the lectures moved very quickly, and I had a hard time keeping up. This tended to be when there was a lot of content on the	5/6/2019 10:50 AM

slides with a lot of new definitions and descriptions. Then, there would be times when we would walk through multiple examples of an algorithm or procedure that was incredibly easy to follow and didn't need all of that time (e.g. the final lecture comparing RMS and EDF). The slower pace was nice to catch up, but the lectures could be easier to follow if the faster sections were paced a bit better.

91	It's extremely helpful already but here are useful suggestions: - The ability to increment/decrement by 30 seconds (like on echo360). - Captions (like on youtube) (not that important but would be helpful)	5/6/2019 10:26 AM
92	Linking directly to the .mp4 rather than a HTML page that just plays the video anyway	5/6/2019 9:42 AM
93	Including time complexity for algorithms could help	5/6/2019 9:31 AM
94	Easier assignments are better	5/6/2019 9:16 AM
95	Please include some of the admin related notices into the video instead of purely content e.g if you mention when an assignment will be released or the results will be released as I know sometimes this was omitted from the recordings	5/6/2019 9:08 AM
96	Don't change them. You're one of the best lecturers in cse by a long way.	5/6/2019 8:06 AM
97	Probably give original lecture slide without drawings and one with drawings	5/6/2019 7:46 AM
98	Nope they're pretty good.	5/6/2019 3:35 AM
99	Going along well as is!	5/6/2019 2:28 AM
100	Like how you do your examples with drawing but more since it's easier to visualise than just explaining. That's just me though I'm a visual learner.	5/6/2019 2:26 AM
101	Questions from the audience were impossible to hear. Altering your answering style to repeat the question would give video captures context and help significantly.	5/6/2019 2:02 AM
102	A face cam would be nice	5/6/2019 1:40 AM
103	A small face Infront of the slides like Jaz does would be great	5/6/2019 1:29 AM
104	No	5/6/2019 1:02 AM
105	Allow a mechanism to go back or forward 5 seconds, like youtube for the videos. This allows you double check on what the lecturer is teaching.	5/6/2019 12:55 AM
106	cant think of anything	5/6/2019 12:53 AM
107	It's better to give more hints for assignment 2 and 3, such as leading students to read related code and teach them techniques about debugging.	5/6/2019 12:53 AM
108	Very good standard. Kevin truly cares about the videos, often an after thought for other academics. Theyre way better than echo 360	5/6/2019 12:52 AM
109	Maybe a bit more help on getting us started with the assignment.	5/6/2019 12:28 AM
110	Make it interesting, I went to lectures few times, always fell sleepy after first hour. Or probably speak too slow	5/6/2019 12:24 AM
111	No	5/6/2019 12:14 AM
112	Keep content fresh and maybe a bit more organised/sequential	5/6/2019 12:14 AM
113	Already excellent	5/6/2019 12:12 AM
114	Nothing really, you did a recap of some concepts we might've forgotten from COMP1521, etc and this was very helpful.	5/6/2019 12:11 AM
115	Echo works fine, it will also have a video of Kevin automatically	5/6/2019 12:08 AM
116	The lectures are totally amazing and very comprehensive for covering the content!	5/6/2019 12:07 AM
117	N/A	5/5/2019 11:59 PM
118	Sometimes the voice is a little bit low.....	5/5/2019 11:59 PM
119	No	5/5/2019 11:59 PM
120	Sometimes the videos would run a bit slow or take a while to load; as in up to 5 mins. Other than this they're great and a lot better than echo360. I really liked that there was a conscious effort to record all aspects of the lecture, including repeating of questions other students had asked. Running them yourself also means there's no random cut offs like in other courses	5/5/2019 11:58 PM
121	The ability to download lectures. I have friends that commute by train frequently without signal who would appreciate being able to watch lectures on their way home.	5/5/2019 11:57 PM
122	n/a	5/5/2019 11:55 PM
123	Go over past assignments	5/5/2019 11:54 PM

124	I can't comment on lectures as I've only been to 3 of them. I think videos are perfect as they are, the hosting solution is simple and straightforward (and competent enough to use in-browser with the playback speed option).	5/5/2019 11:53 PM
125	Something that is easy, effective, cost-free: Ask everyone to gather up the front. The one or two lectures I had by Joe Wolfe, the legendary UNSW physics lecturer, did this, and explained that research showed it as an effective way to improve student performance. Aside from that, perhaps a bit of live code. Spin up your dev environment. E.g. when you show the File System is concerned with a device, and where it's mounted, you can open up OS161, and go into sfs.h and show how FS info is in the sfs_fs struct, and how it works with a specific device.	5/5/2019 11:51 PM
126	add keyboard shortcuts	5/5/2019 11:48 PM
127	None, they're very well produced.	5/5/2019 11:47 PM
128	Better notes to go along with the lectures. This would take up a lot of time though and the course is already good so don't hurt yourself too much!	5/5/2019 11:45 PM
129	One of the later videos had really distracting background noise (due to construction). I understand that there's not much you could do about that.	5/5/2019 11:44 PM
130	It's better to add some useful subtitles.	5/5/2019 11:43 PM
131	honestly not really, they're pretty good	5/5/2019 11:41 PM
132	all good so far	5/5/2019 11:38 PM
133	A summary of what details of the lecture we're expected to know for examination purposes (a little more specific than the learning outcomes).	5/5/2019 11:38 PM
134	Maybe have a bit more interactivity if time allows	5/5/2019 11:37 PM
135	For video: Umm properly you can also record yourself and put it together in the lecture videos For lectures: because OS require a lot background information maybe it's better for student to prepare it before lecture, like few introduction videos	5/5/2019 11:37 PM
136	For the video captures, I sometimes found it inconvenient to not be able to go back or fast-forward 5/10/15 secs.	5/5/2019 11:37 PM
137	Everything was done well, can't think of any improvement	5/5/2019 11:37 PM
138	I think it's good enough, just maybe consider the public holiday in advance so the arrangement for the last few weeks will be more reasonable.	5/5/2019 11:36 PM
139	They were pretty solid overall, nothing comes to mind immediately	5/5/2019 11:35 PM
140	Talk a little bit faster, and improve the slides (slides are difficult to understand)	5/5/2019 11:35 PM
141	the subtitle of echo 360!! the subtitle of echo 360!! the subtitle of echo 360!! the important thing should say 3 times.	5/5/2019 11:34 PM
142	make the annotated slides more readily available	5/5/2019 11:32 PM

**Generally positive feedback, which is good.**

**A bit of contradictory feedback regarding performance. I suspect the issues are on the client side, but would be nice to get feedback confirming issues on high-bandwidth local connections to the server to see if we are maxing it out the ethernet connect to the machine.**

**Plenty of feedback wanting keyboard shortcuts on the video player. I'll provide feedback to Camtasia and see how responsive the company is to requests.**

**I'm a little confused about some feedback as sometimes it appears to indicate students are unaware of the table of contents feature for navigation, and unaware they can download the mp4 and play locally on their machine (without the features of the video player).**

**I've tried subtitles but the translator was quite poor last time I tried it. Maybe it has improved...**

**Q17 The aim of the tutorials is to help you understand the subject material better. Please convey how they performed in this role.**

Answered: 303 Skipped: 10

	<b>STRONGLY AGREE</b>	<b>AGREE</b>	<b>NEUTRAL</b>	<b>DISAGREE</b>	<b>STRONGLY DISAGREE</b>	<b>N/A</b>	<b>TOTAL</b>	<b>WEIGHTED AVERAGE</b>
The tutorials helped me understand the material	34.32% 104	41.91% 127	10.56% 32	2.31% 7	0.33% 1	10.56% 32	303	4.20
The questions were of appropriate difficulty	27.06% 82	47.19% 143	14.19% 43	2.31% 7	0.66% 2	8.58% 26	303	4.07
The questions should have increased difficulty	9.57% 29	14.19% 43	39.27% 119	23.43% 71	4.95% 15	8.58% 26	303	3.00
<b>The number of questions was appropriate</b>	16.83% 51	47.19% 143	16.83% 51	9.57% 29	0.33% 1	9.24% 28	303	3.78
The number of questions should be expanded	10.26% 31	14.24% 43	39.07% 118	23.84% 72	2.98% 9	9.60% 29	302	3.05
I always prepared for the tutorials	4.97% 15	14.24% 43	24.17% 73	32.78% 99	11.92% 36	11.92% 36	302	2.63

**The results are pretty similar to past years, except a drop from 24% to 16% for appropriateness of number of questions. I'll interpret that as a comment on the squeeze on tutorials by trimesters.**

**I'll look at how better to have tutorials cover the material available for 2020.**

Q18 Please rate how effective your tutor was. Check N/A if you did not deal with the particular tutor.

Answered: 303 Skipped: 10

	EXCELLENT	GOOD	OK	MARGINAL	POOR	N/A	TOTAL	WEIGHTED AVERAGE
██████████ ██████	19.32% 51	5.30% 14	1.14% 3	0.00% 0	0.00% 0	74.24% 196	264	4.71
██████ ██████████	6.00% 15	4.40% 11	4.00% 10	0.00% 0	0.00% 0	85.60% 214	250	4.14
██████████	11.20% 29	5.41% 14	3.47% 9	1.16% 3	0.77% 2	77.99% 202	259	4.14
██████	11.37% 29	10.98% 28	5.88% 15	1.57% 4	1.18% 3	69.02% 176	255	3.96
██████████	17.76% 46	5.79% 15	3.09% 8	0.77% 2	0.00% 0	72.59% 188	259	4.48

**No big issues on the tutors, only a little natural variation.**

## Q19 Any suggestions for improving tutorials?

**Kahoots appear divisive. Note: Kahoots are how one tutor engaged the class, not an OS-wide approach. Feel free to give feedback to tutors during course.**

Answered: 117 Skipped: 196

#	RESPONSES	DATE
1	We may get some notes from the tutor when they explain the question.	5/17/2019 3:56 AM
2	Faster paced.	5/16/2019 9:34 PM
3	More than just kahoots	5/16/2019 5:18 PM
4	No	5/16/2019 3:26 PM
5	no	5/16/2019 1:04 PM
6	Probably needed more time to cover all the content. It felt like we didn't even cover the final lectures in the tuts (may just be a result of trimesters).	5/16/2019 11:32 AM
7	Maybe less Kahoot questions and more 'work-through' questions	5/16/2019 3:08 AM
8	██████ is great. He's vast depth of knowledge is really refreshing when material itself is not interesting enough to keep you engaged. However he lacks engagement in anything else and I find myself struggle to listen to him and his explanations when he goes so fast through them. I do not believe that teaching is providing explanations to answers of the tutorial questions. It should be a reflection of what you have learnt and an extension of your knowledge gained from lectures and assignments. His feedback was always insightful and specific.	5/16/2019 1:21 AM
9	Make them longer to compensate for trimesters (reduction from 12/11 to 9 hours total)	5/16/2019 12:41 AM
10	Could perhaps improve the delivery of course material by being more passionate	5/16/2019 12:05 AM
11	Delete trimester and maybe some lab works or help session rather than having to do appointment?	5/15/2019 11:41 PM
12	The explanation and reply to questions was not satisfactory	5/15/2019 11:22 PM
13	Na	5/15/2019 11:13 PM
14	Nothing	5/15/2019 10:27 PM
15	N/A	5/15/2019 5:58 PM
16	More thorough tutorial answers please!!	5/15/2019 1:38 PM
17	Kahoot is very helpful	5/15/2019 11:49 AM
18	Tutor didn't seem all that engaged, emphasized that tutorials were optional, I never ended up learning his name tho RIP.	5/14/2019 4:54 PM
19	I know a lot of people didn't attend, but I thought they were really useful. Louis was very helpful going through the content and having someone face to face to ask questions about the lecture and the tutorial questions helped me immeasurably.	5/14/2019 1:13 PM
20	N/A (didn't attend)	5/14/2019 11:42 AM
21	No	5/13/2019 6:45 PM
22	Make ██████ do all the tutorials	5/13/2019 4:39 PM
23	Tutor can explain more each question in tutorials.	5/13/2019 2:17 PM
24	No. Since the answer would be released soon enough	5/13/2019 2:08 PM
25	Maybe more practical stuff to help with assignments?	5/13/2019 2:06 PM
26	They were great!	5/13/2019 2:04 PM
27	Give them more time. 10 weeks is too less.	5/12/2019 10:29 PM
28	I don't have tutorials, sorry! but maybe we can add tutorial sessions for the extended course, too.	5/12/2019 12:13 PM
29	Na	5/12/2019 10:46 AM
30	not in particular	5/11/2019 10:18 PM
31	I work full time so found it challenging to attend all the time. Would be good to have some tutorials in the evenings (e.g. 6pm, 7pm).	5/11/2019 3:58 PM
32	Going over the questions most weeks felt pointless given the answers were made available and the forum was there to ask questions.	5/10/2019 6:27 PM
33	The depth was good but we usually ran out of time - some way to balance the two a little better?	5/10/2019 11:01 AM



34	tutorials often can't go over all the questions in time so cover the content more concisely	5/10/2019 2:18 AM
35	More of them? There were a lot of questions/things not covered.	5/9/2019 2:55 PM
36	nope	5/8/2019 11:40 PM
37	N/A	5/8/2019 7:53 PM
38	More diagrams either in questions or answers. Review lecture content briefly before go through questions	5/8/2019 6:41 PM
39	tutorial should be more well-prepared	5/8/2019 11:24 AM
40	More preparation on the tutorial questions and content. Even though the tutor was exceptional at the idea OS itself, it would be better if the tutor could take time to think about how to portray the idea to us.	5/7/2019 4:59 PM
41	Nup :)	5/7/2019 4:25 PM
42	Tutors to be prepared for tutorials Not just skip through tutorial content because the answers are "in the lectures" Structured and well paced tutorials	5/7/2019 4:20 PM
43	Cancel it	5/7/2019 4:01 PM
44	Emphasize how important it is to go to tutorials. I kind of thought that tutorials were just for answering questions (and thus could be replaced with Piazza). I didn't realize just how helpful they were in consolidating the lecture material. It really ties it together. I think students should be asked to attend just the first few before they decide whether or not to attend.	5/7/2019 3:54 PM
45	Too many questions for reduced number of tutorials - most tutorials did not cover all the questions	5/7/2019 2:36 PM
46	speak clearly	5/7/2019 12:59 PM
47	More diagrams on the board would have been helpful for explaining things.	5/7/2019 11:32 AM
48	Sometimes due to questions from students we are unable to complete the set questions	5/7/2019 10:59 AM
49	2 tutorials may be needed to cover all necessary material, since we only have 10 weeks now due to trimesters	5/7/2019 10:54 AM
50	Add detailed answers	5/7/2019 3:22 AM
51	Perhaps don't ask class what they know/don't know - just cover all bases incase someone is too shy to admit lack of knowledge	5/7/2019 12:47 AM
52	Questions asked during tutorials are often because we do not understand the content from the lecture/googling, hence answering questions with "refer to google/refer to lectures" does not help	5/6/2019 11:39 PM
53	I went to one of [redacted]'s tutes once as [redacted] was away and he was far better. [redacted]'s method of kind free flowing it whilst works well sometimes [redacted]'s more structured tutes worked better for me. Basically Micheal does the tute questions and [redacted] provides a wealth of knowledge regarding the topic that is not in the exact same order	5/6/2019 10:32 PM
54	We didn't have enough time to cover a satisfactory amount of content. I don't see how this can be fixed without adding an extra hour for a tutorial though.	5/6/2019 10:26 PM
55	Can they be recorded too?	5/6/2019 10:14 PM
56	n/a	5/6/2019 8:37 PM
57	no, not really	5/6/2019 7:27 PM
58	None	5/6/2019 5:56 PM
59	Extended stream students need tutorials. I attended [redacted]'s tutorials for the majority of the course and they were by far the best resource for learning. Tutorial questions were helpful, but often not enough time to go through all of them in class. However more questions would be welcome for revision.	5/6/2019 4:11 PM
60	[redacted] used Kahoot to explore the tutorial questions. I found that was very effective because it made sure the class knew the basics before attempting the tutorial questions which could have been difficult for some. It was fun and interactive - I'm not sure about the other tutors, but I think this is a good suggestion to them.	5/6/2019 4:04 PM
61	Ext course - so no normal tutorial.	5/6/2019 3:19 PM
62	[redacted] was very smart, seemed to know all the answers to all the questions. He was alright at teaching it because he understands the content quite well, but I think he finds it difficult to engage with the students, which makes it very hard to stay focused in his tutorials.	5/6/2019 2:19 PM
63	More time for tutorials as we could barely go through half of the contents	5/6/2019 2:06 PM

Note: the aim is to have students prioritize what's important, not cover everything.

We all learn differently, unfortunately no one way works for all.

Extended student should query whether they should be in extended if they need the tutorials in addition to the advanced tutorial/lecture.

64	He is a legend.	5/6/2019 1:56 PM
65	Perhaps create lab classes in addition to the tutorials for assignment help (Yes I know, I've probably said this 3 times by now)	5/6/2019 1:51 PM
66	More class engagement and check for student understanding regularly. I am aware that this is often difficult for a tutor to do.	5/6/2019 12:57 PM
67	None.	5/6/2019 12:48 PM
68	nothing	5/6/2019 12:23 PM
69	Make them more interactive. Have occasional take-home quizzes that we go thru in them.	5/6/2019 12:20 PM
70	No	5/6/2019 12:15 PM
71	██████ had a lot of knowledge but was sometimes a bit too fast and assumed knowledge of the class.	5/6/2019 11:56 AM
72	The answers seem unfinished sometimes. I know in our tutorial we never get to go through every question so having the answers are helpful for revision.	5/6/2019 11:56 AM
73	I think it was hard most of the time for ██████ to go through all the questions. I know its our responsibility to revise them before hand. But maybe having the answers given earlier would help.	5/6/2019 11:52 AM
74	Highlight important questions since there is insufficient time to cover all questions properly	5/6/2019 11:42 AM
75	N/A (Very good)	5/6/2019 11:37 AM
76	N/A	5/6/2019 10:54 AM
77	was not enough time in tutorials. Some issues with synchronization between tutorial content and lectures	5/6/2019 10:52 AM
78	time management : we start always 5 minutes later because the tutor has not finished his last tutorial...	5/6/2019 10:39 AM
79	Perhaps reducing the number of questions per tutorial. My tutor never got through all questions	5/6/2019 9:43 AM
80	At the start asking which questions are wanted to be covered	5/6/2019 9:35 AM
81	None	5/6/2019 9:18 AM
82	██████'s style of using Kahoot was a fun way to engage the students and also anonymously grasp an understanding of the student's knowledge. Would highly recommend you take a look at his teaching style, it is one of the best I have seen throughout my degree so far!	5/6/2019 9:09 AM
83	Maybe change some questions. I didn't feel like I was learning/reinforcing what I've learnt so I stopped going halfway through the term.	5/6/2019 8:50 AM
84	Not really	5/6/2019 2:28 AM
85	None I can think of, ██████ was terrific!	5/6/2019 2:28 AM
86	No, these were great. More questions would be nice as it would help with exam prep.	5/6/2019 2:04 AM
87	Tutorials should steer more towards things you couldn't do/wouldn't have the time to do yourself. Things like small demonstrations and inspections of the lecture topics executing on real machines would really help solidify some of the topics I do appreciate the difficulty in carrying this kind of thing out, especially with the limited time the tutors have to prepare for tutorials.	5/6/2019 1:56 AM
88	More interactive	5/6/2019 1:49 AM
89	More time? 1 hour is a bit short with the amount of content we have to go through.	5/6/2019 1:22 AM
90	- Having less questions, to allow more time to go through each question	5/6/2019 1:14 AM
91	Tutor was not that engaging	5/6/2019 1:02 AM
92	I think walking through the assignment code would be helpful.	5/6/2019 12:57 AM
93	None. Its of high quality	5/6/2019 12:53 AM
94	Sometime maybe having questions that classify as important so tutor know what questions are critical and need to be gone through rather than rushing it at times	5/6/2019 12:49 AM
95	More tutor should be like ██████ :D	5/6/2019 12:29 AM
96	No	5/6/2019 12:15 AM
97	N/a	5/6/2019 12:12 AM
98	None	5/6/2019 12:00 AM

99	I didn't need to attend them as the lectures and the textbook were sufficient	5/5/2019 11:59 PM
100	Ask [REDACTED] about the kahoots he ran, these were fantastic, and massively improved my understanding of the content compared to tutorials for other subjects.	5/5/2019 11:58 PM
101	Delegate to a tutor to write up a lesson plan template. Aims, motivations, revision questions, suggested questions, time-gates. Make sure each tutor is comfortable to use the lesson plan. The questions are good, but never enough time to go through all of them. Have a small number of tutorial discussion questions" then a set of "piazza discussion questions" or something else, like put the rest into video tutorials.	5/5/2019 11:57 PM
102	I appreciate how they are straightforward, but I wish we had more time to go over all the questions.	5/5/2019 11:56 PM
103	n/a	5/5/2019 11:53 PM
104	I'm actually doing the extended course but going to the tutes really helped. I'm glad we had the option to crash	5/5/2019 11:51 PM
105	Already really good. ([REDACTED] was great)	5/5/2019 11:49 PM
106	Nothing	5/5/2019 11:49 PM
107	Do more exercises with us.	5/5/2019 11:45 PM
108	maybe increase to 2 hours , so that 1 hour could be used for tutor to introduce something related to os that they think is pretty good. then the other 1 hour for problem solving	5/5/2019 11:41 PM
109	More questions would have been nice, I find them useful to check my understanding of lectures.	5/5/2019 11:41 PM
110	n/a	5/5/2019 11:40 PM
111	-	5/5/2019 11:39 PM
112	N/A	5/5/2019 11:38 PM
113	The time arrangement can be more reasonable to attend, some tutorial are just before the class	5/5/2019 11:38 PM
114	The public holidays were annoying in that it screwed up the tutorial schedules, but again not sure how to deal with that nicely	5/5/2019 11:37 PM
115	Less questions - we never went through them all in one tutorial.	5/5/2019 11:36 PM
116	the kahoot style of tutes were very nice	5/5/2019 11:35 PM
117	Was happy with the format of extended tutorials	5/5/2019 11:33 PM

**Main takeaway is the tutorials are a bit of a squeeze. I'll look at how to better manage the covering the content for 2020.**

## Q20 How successful were the assignments in developing your practical skills with the concepts covered in lectures.?

Answered: 302 Skipped: 11

	VERY	(NO LABEL)	SOMEWHAT	(NO LABEL)	NOT ALL	TOTAL	WEIGHTED AVERAGE
(no label)	57.28% 173	25.83% 78	12.91% 39	2.98% 9	0.99% 3	302	4.35

**Similar to past years.**

## Q21 Please rate the level of difficulty of the assignments.

Answered: 302 Skipped: 11

	TOO EASY	(NO LABEL)	JUST RIGHT	(NO LABEL)	TOO HARD	TOTAL	WEIGHTED AVERAGE
Asst1: Synchronisation	20.86% 63	33.11% 100	42.72% 129	3.31% 10	0.00% 0	302	3.72
Asst2: System Calls	0.66% 2	5.30% 16	58.94% 178	27.81% 84	7.28% 22	302	2.64
Asst3: Virtual Memory	0.66% 2	4.97% 15	44.37% 134	27.48% 83	22.52% 68	302	2.34

Asst1 had an increase from 7% to 21% responding with "too easy". I can see why and no thinking was required as solutions were available in the lecture slides. This was by design to have a conservative start for trimesters. The problems were really only a "transfer to code" exercise. I'll look at adding a more challenging but small problem to the set for 2020.

Asst3 had an increase from 14% to 23% responding with "too hard" despite reducing the scope of the assignment. Hard to know if this was due to increase in students without enough background, or if the reduction in scope actually made it harder by not forcing students to understand more of the system?

Q22 How well was each assignment specified (taking into account a significant part of the assignments is understanding what to do from the commented code itself)?

Answered: 302 Skipped: 11

	VERY CLEARLY	(NO LABEL)	OK	(NO LABEL)	CONFUSING	TOTAL	WEIGHTED AVERAGE
Asst1: Synchronisation	67.55% 204	16.89% 51	12.91% 39	2.32% 7	0.33% 1	302	4.49
Asst2: System Calls	28.48% 86	28.48% 86	25.17% 76	8.94% 27	8.94% 27	302	3.59
Asst3: Virtual Memory	20.20% 61	25.17% 76	24.50% 74	15.56% 47	14.57% 44	302	3.21

Assignment 1 spec was about 10% clearer than in the past - suspect that was due to problems being covered in lectures and no significant thinking required.

A small increase in the level of confusion (5-ish %) for asst2 and asst3. Hard to know if this was due to time pressure, background, reduced scope. Interestingly, there was more specific guidance this year.

## Q23 Did the supporting material (video, manuals, notes, comments in code) provide sufficient information for solving the assignment?

Answered: 302 Skipped: 11

	VERY MUCH	(NO LABEL)	SOMEWHAT	(NO LABEL)	NOT AT ALL	TOTAL	WEIGHTED AVERAGE
Asst1: Synchronisation	71.85% 217	14.24% 43	11.26% 34	2.32% 7	0.33% 1	302	4.55
Asst2: System Calls	41.06% 124	26.82% 81	24.50% 74	6.62% 20	0.99% 3	302	4.00
Asst3: Virtual Memory	33.44% 101	24.83% 75	27.15% 82	12.58% 38	1.99% 6	302	3.75

Interesting that for all 3 assignments "very much" increased by about 10%, which seems a little contradictory to the previous questions.

This also confirms that it's obvious asst1 is straight out of the lecture slides.....

The other assignments require applying high-level understanding to low-level code, which requires a little more work than finding the solution on the slides...

## Q24 Select all the choices below that describe your approach to attending the dedicated assignment tutorials.

Answered: 302 Skipped: 11

ANSWER CHOICES	RESPONSES	
I had done the prep questions	27.48%	83
I had thought about designs for the assignment solution	50.99%	154
I had started coding	27.81%	84
I just showed up to see what I could learn	45.03%	136
I skipped the tutorials.	22.19%	67
Total Respondents: 302		

**It's a shame the 22% of students don't take advantage of the guidance available.**



## Q25 Any suggestions for improving the assignments?

Answered: 131 Skipped: 182

#	RESPONSES	DATE
1	I feel that the assignments have a large learning curve to start them and quite difficult to debug them. It would be nice if possible to have them more difficult (or larger) but easier to start and debug as I feel I would learn more.	5/16/2019 9:37 PM
2	No	5/16/2019 5:19 PM
3	Assignment 3 left many details unspecified. Eg what to do with heap space	5/16/2019 4:50 PM
4	it would have been better if the information was less separated as it was time consuming to just find all the information about what we were supposed to do, and with trimesters this was a real problem and often meant that we had to start coding before we had all of the information. <b>It also mad it very difficult to complete the assessment by the early bird deadline. also would have been good to have the tutorials on the assignment earlier.</b> there was only 1-2 days after my tutorial for the early bird deadline, with the other classes there real wasn't enough time to wait till after the tutorial to work on the assignment ... which meant that a lot of the time had to quickly adjust how we did things given the new information.	5/16/2019 3:37 PM
5	how de we even start	5/16/2019 1:05 PM
6	They were quite good.	5/16/2019 11:33 AM
7	Make more intensive	5/16/2019 8:50 AM
8	No suggestions here, but I did find myself more time on the forums than the actual spec itself	5/16/2019 3:10 AM
9	Assignments which I did nearly single handedly demonstrated nothing of what I had learnt. Both System calls and virtual memory done in groups had absolutely restricted me from what I could be doing as I had to wait on my partner because they wanted to do some part of it but was too sick of incapable of understanding the material. Barely scrapping through with everything else I had to do I would have to rush the assignments towards the end and figure out what the hell "design" meant. There was no explanation of what it all meant in lectures or tutorials and I found myself searching the web to answer the design questions because my knowledge from the course proved useless. For example, when translating from virtual to physical the design was to do all the bit shifting in which in the assignment lecture, Kevin had shown us what to do. Applied didn't work. I got bus errors and tlb duplicated entries and piazza responses were as cryptic. The skeleton for a good assignment is there, just not in its current configuration. I attended the syscall tutorial and learnt absolutely nothing to help with my design problems ending up haphazardly putting together the pieces of my assignment into something I could barely submit	5/16/2019 1:32 AM
10	No comment	5/16/2019 12:44 AM
11	Overview of code itself regarding each assignment, since there are alot of files and one gets lost when digging in OS code	5/15/2019 11:24 PM
12	Better structured instructions.	5/15/2019 10:30 PM
13	Could be a BIT clearer in the code/directory layouts about what the input to certain functions is, and where the code is called, so it's clearer how the code is expected to behave. For example, for the <code>as_define_region()</code> function in <code>asst3</code> has an input (int) called 'writeable', which was apparently NOT a bit (i.e. it had values other than 0 or 1). This was not obvious and was a major bug for me and my partner, who both assumed it was a bit. Better info about the nature of the parameters to functions would have helped. Also for <code>asst3</code> , we had little idea WHERE the code/functions we were implementing were actually called, so little idea as to how it was expected to behave. Navigating the code base to find where X constant was defined and Y function was used was not trivial.	5/15/2019 8:32 PM
14	n/a	5/15/2019 6:00 PM
15	Last assignment needs a lot more help please...	5/15/2019 1:39 PM
16	More time is better	5/15/2019 11:50 AM
17	Add some of the common piazza questions to FAQ for next trimester. Possibly give more information and instructions.	5/14/2019 11:49 AM
18	No	5/13/2019 6:47 PM
19	<b>Release assignment 3 earlier please!</b>	5/13/2019 4:40 PM
20	Writing the assignment spec more concisely.	5/13/2019 2:42 PM

Hmm, the early bonus I have to re-evaluate as a motivator for starting early. It may not fit that well in trimesters.

Can't as it contains partial solutions to assignment 2.

21	It is difficult to start with little consultations. Need more practices from lectures and courses.	5/13/2019 2:21 PM
22	I wish I could have more time for the last assignment. I think it could be released sooner after the deadline of assignment 2	5/13/2019 2:10 PM
23	Bit clearer about what needs to be done, like covering data structure stubs or covering more prac so the assignment isn't so daunting about what to touch or how to do it.	5/13/2019 2:09 PM
24	They were of fair difficulty and the lecture videos dedicated to the assignments were helpful	5/13/2019 2:05 PM
25	More clear about what is required of our code. Instead of enhancing my understanding, i felt I needed a good understanding in the first place to solve it. Which I suppose might have been the point but spent a lot of time figuring out instead of doing which got tiring	5/13/2019 1:38 PM
26	Be easy	5/13/2019 1:12 PM
27	N/A	5/12/2019 10:31 PM
28	No Trimesters. Virtual Memory needed more time because our first implementation crashed and burned and we didn't have enough time to rewrite and debug it properly.	5/12/2019 1:23 PM
29	I think it would be good to allow students to do the advanced part of the assignment even though they haven't finished the normal one by the early bird deadline. I think this will encourage more students to try the advanced part and possibly learn more from it.	5/12/2019 12:16 PM
30	A bit more hints maybe for asst3. The rest was time and having bonus marks is a great idea	5/12/2019 10:47 AM
31	maybe a light mention of how the c code and assembly code interface works, and also the highlight the interface between the kernel and userland because that was a bit difficult to trace down to step through what was happening	5/11/2019 10:20 PM
32	Please don't make us do them in groups. Maybe just cut them back to about 80% of the work and give them out as individual assignments.	5/11/2019 4:03 PM
33	Explaining the process a bit better	5/11/2019 11:14 AM
34	Make them more about design/algorithm (e.g. the allocator that was removed) sometimes it felt like the changes/payoff was so small for so much reading of code.	5/10/2019 6:30 PM
35	sometimes the all assignment files involved in the assignment aren't mentioned which causes some confusion	5/10/2019 2:19 AM
36	Re-enforcing mandatory completion of the advanced part of the assignments for extended students would be good - since they were only optional, I didn't do them, even though I would've liked to so I could learn more. I don't believe trimesters disallow doing so.	5/9/2019 2:34 PM
37	More consultation hours in submission week.	5/9/2019 11:06 AM
38	nope	5/8/2019 11:40 PM
39	i would prefer a more specified assignment instead of having to read code and ask on piazza what i was meant to do	5/8/2019 8:55 PM
40	More resources before starting	5/8/2019 7:56 PM
41	<b>Provide some tools or advice on navigating a large code base.</b> I had trouble working out which .h file was included. E.g. they say include types.h but there were numerous versions of types.h as well as other .h files with similar names. I would have appreciated some help on working out how to find each file (some were buried) and then by looking at a .c file being able to distinguish which particular file it was	5/8/2019 6:45 PM
42	Asst 1 and 3 felt a bit too easy and greatly simplified. Asst 2 was a good difficulty.	5/8/2019 4:56 PM
43	I did not know there was Assignment help video at extended lecture (for Assignment 1). Kevin said there was but I was not sure it was particularly in 'extended lecture' because I'm not studying extended lecture.	5/8/2019 4:41 PM
44	More coding in assignment tutorials	5/8/2019 2:47 PM
45	should be more specific about how to design the solution, more document to help coding	5/8/2019 11:28 AM
46	could be easier	5/8/2019 5:47 AM
47	I dont really like the compulsory grouping thing. I could complete it single-handedly and working on an assignment alone allows me to learn EVERYTHING about it and not just a part of it, and I wont have to adjust my schedule around another person.	5/7/2019 8:02 PM

I made this point and suggested VScode so you don't have to navigate files manually???

48	Release earlier, spread across term better	5/7/2019 7:29 PM
49	It would be better if the instruction is stated more clearly, however the current assignment is not bad.	5/7/2019 5:00 PM
50	Asst0 is unnecessary	5/7/2019 4:02 PM
51	Give more information on the functions necessary to complete the assignment AND the built-in functions.	5/7/2019 3:55 PM
52	Either increasing time frame or increasing time between assignments - felt like I was rushed into applying lecture concepts I didn't fully grasp until midway through the assignment	5/7/2019 2:38 PM
53	Make the last 2 assignments shorter and less time-consuming. I found it very hard to make time for them especially when I had assignments for other courses to do and I have to work part-time. The first assignment on synchronisation gets to the point and doesn't require lots of reading.	5/7/2019 11:39 AM
54	There are massive code need to be read and hard to follow the structures. Sometimes we need to find the bugs before knowing which function are missed. Better if add hints about which part we should specifically focus on. Also, debugging is a terrible thing	5/7/2019 3:28 AM
55	Add an entry point for us to read the code base, the code base it too large.I spent most of my time finding an entry point. Reading the code is important, and I learn a lot from it, but I suggest an entry point can save me some time so I can actually read code that is helpful.	5/7/2019 2:04 AM
56	For assignments 2 and 3, simply provide a clearer picture of what the assignment should do, and without giving away too much, provide some concrete steps	5/7/2019 12:48 AM
57	Lecture video was helpful, more explanation for outline would be nice	5/6/2019 11:41 PM
58	This is only for assignment 3: Perhaps give a higher level understanding of the assignment instead of giving out tidbits of information and expecting students to grasp how everything fit together quickly.	5/6/2019 10:29 PM
59	Maybe an extra one but trimesters so guess not. :)	5/6/2019 10:25 PM
60	First two were okay. Implementation specifications were clear enough. Last one was confusing.	5/6/2019 10:19 PM
61	More emphasis on the fact that the solution does not implement everything, but rather just is a piece in the jigsaw puzzle... It's easy to get the impression that we need to implement everything, but so much of the work is done for us, and it takes ages to work out exactly what needs to be completed, and what needs to matchup with what...	5/6/2019 9:54 PM
62	I did feel that there was a little too much hand-holding, but as stated in a previous answer, I believe this might've been deliberate to facilitate for the shorter time we had in trimesters.	5/6/2019 8:39 PM
63	Making it more clear what's already written + what needs to be implped	5/6/2019 6:01 PM
64	make it a bit more clear in the written specifications about which files need to be edited/written	5/6/2019 5:00 PM
65	Spec is verbose but unclear. Too much unnecessary information and only a few sentences about the actual task. The latter needs to be described in much more detail, even if the assessment is largely focused on students' own designs. Comments in code helped somewhat, but a brief and clear spec would have saved unnecessary hours deciphering the actual task.	5/6/2019 4:16 PM
66	The assignments are pretty good, and they are indeed very challenging (ASST2, ASST3). The main problem (the main difficulty) is the density of assignments during trimesters (that is to say, the problem is not with the course itself). The later courses go on, the more difficult assignments generally are, and the less time and more stressed we are doing our assignments (especially for those working part time, doing full time uni like me). The assignments themselves don't need changing because they teach the course content pretty well, however I do wish there was some way to alleviate some of the pressure on us, maybe by giving us more hints on how to do them, so we don't have to spend as much time looking through the code, trying to understand it.	5/6/2019 4:09 PM
67	VM - provide more information about what should we look at and what should we do, a skeleton of implementation is better. The thing is that we have too much freedom in designing the vm - so make bits of confusing. Also, leave the implementation of frame table to our, so we can get better understanding of what we should do.	5/6/2019 3:22 PM
68	Sometimes it was confusing to have information in the spec and in the piazza forum and in the extension lecture and in the normal lecture. A lot of time spent compiling information even before learning it. Not sure how to get around that. Was unable the final assignment due to syntax errors and lack of understanding in how the alloc kpages function needed to be used. It's our fault but it was hard to get done in time with other assignments. Studied piazza very hard and asked	5/6/2019 2:12 PM

questions but it all came a bit too late.

69	Provide student with more debugging tools. My group was stuck on a small bug that we could not figure out and the TLB was always empty. Took us over a day to find that bug since GDB and TLB were not showing us anything significant	5/6/2019 2:08 PM
70	May give more knowledge on how the implementing part interacts with other part of the system so that more clear what to do.	5/6/2019 1:47 PM
71	For the harder assignments (i.e. 2 and 3) provide a somewhat more broken down guideline on how to implement the assignment, but don't give too much away in the guide.	5/6/2019 1:34 PM
72	More opportunity to ask individual questions and seek help from the tutor. Consultation sessions were often very full so having access to the tutor outside of class time would be very useful.	5/6/2019 12:59 PM
73	None.	5/6/2019 12:49 PM
74	n/a	5/6/2019 12:23 PM
75	Less focus on coding, more on theory.	5/6/2019 12:22 PM
76	Assignment 1 could be more challenging	5/6/2019 12:16 PM
77	Would it be better if we could have bit more worked part for kick-start ?	5/6/2019 12:07 PM
78	Amount of assignments does seem to be too much, especially for a 10/11 week term.	5/6/2019 11:59 AM
79	A little bit more of a jumping off point would be good for the second and third assignments, felt pretty lost on where to start them	5/6/2019 11:57 AM
80	Make the final assignment harder	5/6/2019 11:42 AM
81	N/A	5/6/2019 11:40 AM
82	Release the assignments only after the content is covered in lectures. I understand that they were released early to allow students to get ahead if they so desired, but as a person who likes to get ahead, I often found it frustrating not knowing how to approach the assignment when I first read the outline. Although I eventually learned to not even look at the assignment until the content had been covered, it made me feel that I was behind, since the assignment had already been out for a week or so.	5/6/2019 11:08 AM
83	Earlier feedback to correct errors from previous assignment on next one.	5/6/2019 10:54 AM
84	- Asst1 was a bit confusing as I did code similar to lecture slides but got pretty low marks - IT would be helpful to know which lectures specifically talk about the assignments because otherwise there's a lot to go through - I don't think the lectures/tutorials were sufficient to understand how to implement actual code for the assignments BUT my experience might be flawed as I was irregular with the lectures and tutorials. Any confusions I had however were clarified through helpful tutors and piazza so it wasn't a problem	5/6/2019 10:32 AM
85	Think it would be handy to have a tutorial on how to setup vscodes internal debugger with gdb. I believe there are sufficient number of vscode users to justify it and I personally found it useful.	5/6/2019 9:56 AM
86	There could be more instructions on how to start	5/6/2019 9:49 AM
87	N/A, they were structured well	5/6/2019 9:45 AM
88	Provide more detailed instructions	5/6/2019 9:38 AM
89	More information with the code base and how to search for what is needed	5/6/2019 9:37 AM
90	Easier assignments are better	5/6/2019 9:20 AM
91	Mentioned previously, but including some helper function headers would be largely helpful in helping students know where to start as I found the hardest part of the assignment s were finding which file to start in.	5/6/2019 9:11 AM
92	Teach a general problem solving approach to these big problems.	5/6/2019 8:53 AM
93	Easier way to provide a feedback loop in the case of an unhelpful partner	5/6/2019 8:25 AM
94	hard part is getting started where to go what to do because after that the concept were do able with lecture notes etc	5/6/2019 2:32 AM
95	The split between regular and advanced content is perfect as is.	5/6/2019 2:28 AM
96	Don't give away entire solutions in the lectures? Or at least encourage students to think of their own solution *before* showing them the answer.	5/6/2019 2:25 AM
97	I found the most difficult part to be starting. Additional code snippets in lectures / supporting material even as possible examples would've helped. This was abundant in the early assignments, not as much for the last two.	5/6/2019 2:07 AM
98	No	5/6/2019 1:03 AM

I'll take a look if I have time.

As one can see from comments, your "give away" is another persons "need more guidance". The balance is hard.

99	Assignments are as it is already nicely crafted :)	5/6/2019 12:59 AM
100	Assignment is difficult to debug, very difficult.	5/6/2019 12:57 AM
101	Give more guidance in regards to the structure or maybe basic example code. When beginning the assignments I was unclear how to actually go about implementing the solution.	5/6/2019 12:55 AM
102	Theyre really valuable. No suggestions further	5/6/2019 12:54 AM
103	For asst3, maybe having the tutorial covered earlier	5/6/2019 12:53 AM
104	The assignments are great in general, just that I think more help for the student to understand how to start the assignment would be better for the course.	5/6/2019 12:31 AM
105	<b>Fisrt assignment too easy but weight too much</b>	5/6/2019 12:27 AM
106	I understand we need to do some work ourselves to understand the OS/161 code but a bit more guidance on how to start would be helpful. Although I did work out the assignments in the end (with my partner), when something went wrong it was hard to know if it was a simple mistake of if our entire approach was faulty.	5/6/2019 12:21 AM
107	More documentation on syscalls and memory	5/6/2019 12:16 AM
108	Maybe make them a tad easier given we're on a week 10 semester ( I know you made them less difficult than in previous offerings)	5/6/2019 12:14 AM
109	A bit more consistent difficulty would be good. For assignment 1 some solutions were in the lecture slides, for assignment 3 the exact structure needed was covered comprehensively in the lectures. For assignment 2 on the other hand, much about the design and info/synchronisation required was left to us to design and work out ourselves.	5/6/2019 12:12 AM
110	Plz bring the frame table back and make assignment 1 more challenging	5/6/2019 12:09 AM
111	The difficulty of each asst varies very significantly....	5/6/2019 12:03 AM
112	Making the early bonus more consistent for all assignments. 4-5 days is probably sufficient for the trimesters, as a week early became difficult for the third assignment but we would've had it done by the 4th day beforehand had the bonus been up. Perhaps even shorter for the third assignment, as other courses seemed to lump everything towards the end of the term which was annoying.	5/6/2019 12:02 AM
113	A lot of the difficulty was in coming to terms with how the lecture content could be used as a guide in the code. Asst0 was very good for this, asst1 felt like I was in the deep end but could be guided by the lecture content, but asst2 and 3 it was difficult to see how to get started. Connect the lectures to the code in a practical sense, and give that "starting the task" nudge that doesn't make it easier, just make the task feel less obfuscated	5/6/2019 12:01 AM
114	<b>Make them implement frames in asst3 like it used to be done (i.e. don't provide unsw.c)</b>	5/5/2019 11:59 PM
115	I liked the idea Kevin spoke about towards the start of the course in allowing future classes to have access to the first two assignments right at the start of the course.	5/5/2019 11:59 PM
116	The application of theory is sometimes difficult to understand after just one lecture and tute	5/5/2019 11:58 PM
117	Give an example data structure along with code and comments in the correct files to start people off.	5/5/2019 11:58 PM
118	Perhaps having more dedicated assignment walkthrough videos (like assignment 2, perhaps released earlier) would give more people the chance to try out the advanced components.	5/5/2019 11:58 PM
119	Provide clearer instructions. I feel like if it weren't for Piazza, I would have never been able to do the assignments. It would be nice to have some things just on the assignment spec (ex: how to zero out pages)	5/5/2019 11:58 PM
120	<b>Increase the time for assignment 3 and force us to implement the frame table because I think that actually seemed like the hardest part of that assignment (apart from paging which I didn't have time to try :(</b>	5/5/2019 11:55 PM
121	I think that the schedule really needed to be improved for the trimester, my teammate and I have to start the assignment 3 in the last week due to the massive amount of workload overall.	5/5/2019 11:54 PM
122	<b>Maybe make us do some of `unsw.c`.</b>	5/5/2019 11:53 PM
123	maybe more debugging help like comprehensive debug tutorial , most of the time when the bug occurs, have no clue where to start	5/5/2019 11:48 PM
124	No, I think they were great -- just the right level of difficulty to get us thinking about the concepts in the lecture.	5/5/2019 11:48 PM
125	I found it difficult transitioning from asst 1 to asst 2, as asst 1 was just in one file and then suddenly asst 2 had you moving around a bunch of files that the spec	5/5/2019 11:47 PM

Agreed, it'll change slightly in 2020.

Unfortunately, I don't think we have time to re-introduce the frametable. It's a challenge to do a VM assignment in a trimester as it is.

never mentions, you have to find yourself. It would have been nice to be eased into asst 2 in maybe asst 1, considering most COMP assignments thus far have very specific specs. Also, I didn't like how a lot of necessary info is in the assignment lecture, and not mentioned at all in the spec. Would have appreciated a more detailed spec.

126	Kind of confused about the asst2 where the proc_fork part when copy the trap_frame to the new thread, maybe the indication could be more detailed.	5/5/2019 11:42 PM
127	it's good already but just a bit confused after I first start it.	5/5/2019 11:41 PM
128	N/A	5/5/2019 11:40 PM
129	More stringent auto testing would be nice	5/5/2019 11:39 PM
130	Make the early bird period longer due to trimesters	5/5/2019 11:37 PM
131	i was happy with the format of the assignments	5/5/2019 11:35 PM

Regarding getting around the code base, this is a skill you should mostly have already from previous coding experience. I also added more specific recommendations to use a code-browsing capable editor like VScode. It's an OS course, not general software skills course (though that appears to be a collateral benefit).

Regarding the early bonus and trimesters, yes, this is an issue. It'll either get dropped altogether, or more time given (maybe for less marks). I'm undecided.

Regarding adding the frametable back, this is also a hard question. I don't think adding more to the assignment is possible due the already high load, which is a shame as I think frametable + page table provides a better understanding.

The first assignment was too easy - i.e. all answers were transferrable from lecture slides. I plan to add a "problem" to that assignment that requires some thinking.

Regarding more versus less guidance/hints.

\* I'm afraid I have to err on the side of "hand holding" than "drop them in the deep end and standby with the life preserver (i.e. piazza)", despite the latter usually resulting in a better understanding - it's too stressful with trimesters.

\* That said, by now student should be able to choose an appropriate data structure or reverse engineer an interface from code and comments - these are software skills, not necessarily OS skills. There are literally an infinite number of solutions to some of the assignments, part of the learning goals are for you to come up with one based on your understanding.

## Q26 Which environment did you use the most for assignment development.

Answered: 301 Skipped: 12

ANSWER CHOICES	RESPONSES	
vlab.cse.unsw.edu.au	12.96%	39
login.cse.unsw.edu.au	12.29%	37
A desktop machine in one of the labs	2.33%	7
WSL on Windows	20.27%	61
Linux running in VMware (or some other virtual machine)	5.98%	18
Linux running native	18.60%	56
MacOS	26.25%	79
Other (please specify)	1.33%	4
TOTAL		301

#	OTHER (PLEASE SPECIFY)	DATE
1	vs code liveshare with my assignment partner.	5/14/2019 12:22 PM
2	ssh	5/8/2019 9:05 PM
3	Linux running Debian docker	5/6/2019 6:03 PM
4	btw i use arch	5/5/2019 11:55 PM

Interesting, the vast majority of the course use a Linux of some variety (I include WSL, which is 20% on it's own). A significant, but much smaller fraction use MacOS. I'm likely to target Linux for dev environment support (I have to do it for school computers anyway) as Macs can also run Linux in a VM.

It's interesting that lab are not used much, remote login (login and vlab) is used by 25%.

No real news here.

## Q27 Which source code editor did you use for the majority of coding.

Answered: 301 Skipped: 12

ANSWER CHOICES	RESPONSES	
Vim	12.29%	37
Emacs	1.66%	5
Eclipse	0.33%	1
Visual Studio Code	65.45%	197
nano	0.66%	2
gedit	8.31%	25
sublime	6.31%	19
Notepad++	0.00%	0
atom	3.32%	10
Clion	0.33%	1
Other (please specify)	1.33%	4
TOTAL		301

#	OTHER (PLEASE SPECIFY)	DATE
1	Clion	5/17/2019 4:46 AM
2	Needle and steady hand (vim)	5/6/2019 6:03 PM
3	Both gedit and atom	5/6/2019 1:53 PM
4	neovim	5/5/2019 11:48 PM

Wow, this really has convinced me that providing some more support for VScode is worthwhile given it dominates.

Vim is a distant second, but anybody who uses vim is probably more of an expert than I am :-)



Q28 Give the size of the OS/161 code base, rate out of 5 how important was it to you to have an editor with code navigation and browsing abilities?

Answered: 301 Skipped: 12

	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
☆	2.99% 9	1.66% 5	5.98% 18	14.62% 44	74.75% 225	301	4.56

This re-enforces my expectation that editors supporting code navigation may life much easier in a large and unfamiliar code base.

Q29 This year we introduced several wiki pages to for students to set up development on self-supported machines. For each topic, please rate the usefulness of the provided page.

Answered: 301 Skipped: 12

	EXTREMELY USEFUL	VERY USEFUL	USEFUL	BARELY USEFUL	NOT USEFUL AT ALL	N/A	TOTAL	WEIGHTED AVERAGE
Working on Linux	26.58% 80	15.95% 48	10.96% 33	1.33% 4	0.33% 1	44.85% 135	301	4.22
Working on Windows	17.61% 53	9.63% 29	8.31% 25	1.66% 5	1.00% 3	61.79% 186	301	4.08
Working on MacOS	16.61% 50	8.64% 26	9.97% 30	5.65% 17	2.33% 7	56.81% 171	301	3.73
Setting up SSH	37.21% 112	20.93% 63	14.29% 43	1.66% 5	0.33% 1	25.58% 77	301	4.25
Setting up gitlab	43.52% 131	22.59% 68	13.95% 42	2.66% 8	0.33% 1	16.94% 51	301	4.28
Startup Checklist	50.17% 151	21.93% 66	16.28% 49	1.33% 4	0.00% 0	10.30% 31	301	4.35
GDB setup	51.83% 156	25.25% 76	12.96% 39	3.99% 12	0.33% 1	5.65% 17	301	4.32

Yep, the MacOS page is getting stale. I don't use a Mac, and the course does not "support" personal machines (Linux gets indirect support due to support the school's computers).

I see what I can do next year, but no promises.

Q30 This year we introduced git and gitlab for managing assignment source code. Please tick any of the following that apply to you.

Answered: 301 Skipped: 12

ANSWER CHOICES	RESPONSES
I only used git/gitlab to download the assignment source code.	24.92% 75
I pushed the final version of my assignments back to gitlab.	63.46% 191
I pushed intermediate commits back to gitlab.	69.10% 208
I used git/gitlab to work on multiple checkouts of the assignments to keep them consistent (e.g. at CSE and on you laptop).	44.85% 135
My partner and I used git/gitlab to collaborate and share commits between us.	74.42% 224
Total Respondents: 301	

**75% of the course took advantage of git and GitLab.**

**25% of the cohort only using git for download is concerning, especially given group work.**

**Some encouragement to learn git is in order to make life easier.**

## Q31 Please share any comments you have on the development environment below:

Answered: 109 Skipped: 204

#	RESPONSES	DATE
1	just an idea, docker repo. For linux users with different distro (I use Arch), it could be difficult to do binary package support for all, and docker might be a solution.	5/17/2019 1:09 AM
2	Great development environment, gitlab for the groups made it very easy.	5/16/2019 9:40 PM
3	Stick with git	5/16/2019 5:21 PM
4	i liked how there was a wide chose on editor to use ( rather than just eclipse). but would have been good to include some information on what we needed to put in gitignore for each editor.	5/16/2019 3:41 PM
5	Problem was the guide for installing os 161 on Linux is only relevant for ubuntu users. <b>There are other popular distros that a lot of people in cse use (i.e. Arch Linux)</b> but the effort into installing it was too much (compatibility issues from installing from source was too much). This isn't that much of a problem since all the work could be done on cse servers.	5/16/2019 11:37 AM
6	There was some confusion working on WSL on windows. Steps to setting up working directories for source code led to it being in the root folder (which is inaccessible)	5/16/2019 3:13 AM
7	Please check commits when marking	5/16/2019 1:34 AM
8	Great and easy tool for collaboration and keeping track of code	5/16/2019 12:46 AM
9	It required a fair bit of set up on my end to get it working in my environment, but once that was done it worked very nicely and smoothly.	5/15/2019 11:37 PM
10	<b>Needing to use a VPN to access UNSW gitlab was a pain. We just used a private github repo instead.</b>	5/15/2019 11:18 PM
11	A	5/15/2019 11:15 PM
12	None	5/15/2019 10:35 PM
13	For developing on Linux, it would be nice if you could provide some more instructions for setting up on non-Ubuntu distros. Luckily, I happened to be developing on Kubuntu, so installation was not a problem for me, but if I had been running a non-Debian based distro like openSUSE or Arch, it wouldn't have been as clear how I was supposed to install the code. I'm not saying you have to make an official package for every distro out there; <b>but even just providing a link to the source code and telling us how we could compile it on non-Debian distros would have been nice.</b>	5/15/2019 8:41 PM
14	n/a	5/15/2019 6:01 PM
15	Wrote earlier. Relevant information were in several different pages and I had to jump back and forth to find the right order (the current order looks? right for some people, however, I had to do them in different order.....)	5/15/2019 1:42 PM
16	easy to use	5/15/2019 11:53 AM
17	<b>The setup instructions assumed that the code was stored in a very particular location. The only change I had to make was to tweak a config file and a few commands but it would be wise to make a note of this on the instructions somewhere.</b>	5/14/2019 4:59 PM
18	<b>The code base is very large and confusing and I think its a testament to the high quality of this course that it was so easy to set up and work on thanks to the instructions. Thank you</b>	5/14/2019 1:13 PM
19	No comment	5/13/2019 6:48 PM
20	-	5/13/2019 4:42 PM
21	The GUI of wiki need more improvements.	5/13/2019 2:24 PM
22	That public key and private key part is helpful for my understanding of ssh	5/13/2019 2:13 PM
23	Overall quite good Easy to setup on linux	5/13/2019 2:11 PM
24	N/A. Very happy with the dev environment	5/13/2019 2:07 PM
25	Confusing at first, but eventually got used to it. Was an intersting experience	5/13/2019 1:41 PM
26	N/A. Me and my partner both used emacs so everything was consistent.	5/12/2019 10:33 PM
27	Absolutely fantastic! All the wikis were clear. Maybe ask around for wiki FAQ from	5/12/2019 1:25 PM

Sorry, but I only have resources to provide a guide for what I personally use.

I'm going switch to https in the default instructions. I did provide details to work around the VPN.

I did?

I'll see what I can do

this year with all the common problems we had

28	I think it was good that we are using git because most students are familiar with the syntax and are able to focus on the assignment itself without having to learn a new development environment.	5/12/2019 12:20 PM
29	It was great	5/12/2019 10:49 AM
30	personally working on windows was a mistake, shouldve just dual booted	5/11/2019 10:22 PM
31	I use a mac and it seemed too hard to get OS/161 running natively on my machine. I did my development by making changes in VSCode, pushing them to gitlab, then checking out these changes after SSH-ing to CSE and running the code there. As you can imagine this was quite painful with a slow feedback loop. It would be nice if you could get a tutor or someone to give some good setup explanations/troubleshooting for mac so I could have done local development and testing. I think it's a great idea to provide git as the default for downloading assignments - it makes it more likely that people will learn some git which is good development practice generally.	5/11/2019 4:07 PM
32	The gitlab website was also has a useful search function to find specific files/code	5/11/2019 1:05 PM
33	I needed to refer to a forum post to actually get it working, the macos guide didn't entirely work for me.	5/10/2019 6:32 PM
34	nope	5/8/2019 11:41 PM
35	use github instead, like how cs1531 makes an organisation and uses it to make teams, release assignments, etc	5/8/2019 9:25 PM
36	Using vLab was easy for the ease of use without set up	5/8/2019 7:59 PM
37	<b>Would like more tools on learning how to navigate the code base effectively. ended up using grep to search though all the directories and sub directories trying to find file or function prototype while my tutor was able to find the files quickly through some menus on his terminal</b>	5/8/2019 6:49 PM
38	Git was a good choice - definitely keep using it	5/8/2019 4:57 PM
39	The instruction of environment setup in MacOS is not up-to-date and not clear.	5/8/2019 11:32 AM
40	<b>Opening vscode is very slow in vlab</b> , so I have to install a Linux system in my laptop	5/7/2019 9:09 PM
41	The assignment 0 was a fantastic way to get us to start off. Small recommendation, a script to find and create cscope.files and compile it `cscope - bq` would be fantastic.	5/7/2019 5:05 PM
42	Linux > Windows :)	5/7/2019 4:27 PM
43	<b>Please do an entire lecture on how to use gdb from scratch with examples and advertise this lecture (send out an email).</b>	5/7/2019 3:58 PM
44	Nice workflow, I think git was a good decision, MacOS setup also easy	5/7/2019 3:39 PM
45	None	5/7/2019 11:45 AM
46	Gitlab is great	5/7/2019 11:03 AM
47	<b>It was harder for people on windows to make commits onto gitlab so other methods had to be employed to share code sometimes</b>	5/7/2019 10:57 AM
48	<b>It's better to use git only for a machine, since conflicts happens frequently for some reason</b>	5/7/2019 5:22 AM
49	Not a good idea to submit the bundle instead of the current files. Zip file may be a better idea	5/7/2019 3:30 AM
50	For assignments it is extremely useful to be able to browse files easily - perhaps dedicate some time to showing exactly with IDE will enable this	5/7/2019 12:51 AM
51	Pretty good job!	5/6/2019 10:30 PM
52	I wish there was a better tool than GDB for debugging. But otherwise, it was a good setup. I used Gedit, but code browsed online with gitlab. That was very useful since remotely running Gedit with SSH to CSE servers did lag occasionally. Gitlab was very useful. Also very useful for collaboration. I was surprised to learn it wasn't used in previous years.	5/6/2019 10:28 PM
53	All was good	5/6/2019 10:26 PM
54	I had issues with most of the environment setup options, and had to kind of use a bit of each.	5/6/2019 9:02 PM
55	Using gitlab was good - easy to use and utilising the web gui is helpful if you're not too comfortable with doing everything through terminal - not sure if this was advertised but might be worth noting for future years.	5/6/2019 8:42 PM
56	I <b>set up os161 gdb debugger in VScode</b> at last assignment and it's very helpful. Wish it can be taught before first assignment so we can enjoy it at the beginning.	5/6/2019 7:06 PM

That's why I encouraged using an editor like VScode.

Be nice to know if the was only "opening" or also "using".

I planning on providing more debugging self study modules.

Expected. You should learn a little about distributed code development.

I may look into this

You don't provide details

57	Initial setup was a bit of a pain but it mostly comes with the territory I suppose. Mostly smooth sailing afterwards, other than having to modify the configure script to specify a custom root directory. Would be nice to have a script to automate this process, with a little bit of user input.	5/6/2019 4:19 PM
58	Window subsystem is hard to use, and after my linux crash, I loss the ability to submit the bundle so have to let other member to submit it. I think it would be wonderful if we can login the cse computer and make bundle, push into git, etc, directly and without any further setting.	5/6/2019 3:25 PM
59	Gitlab is great.	5/6/2019 1:53 PM
60	Gitlab is good. but group collaboration is hard. all the merges are fast-forward merges.	5/6/2019 1:50 PM
61	The development environment was fine.	5/6/2019 1:00 PM
62	None.	5/6/2019 12:50 PM
63	n/a	5/6/2019 12:24 PM
64	Easy for linux users, assistance in setting up environment for mac could be improved.	5/6/2019 12:20 PM
65	I use macOS, but in order to be consistent with the version used in the course, I didn't installed locally. And I didn't get it to install on Mac machine.	5/6/2019 12:11 PM
66	I think there should be a page about using gitlab to share code between partners and solo assignments.	5/6/2019 12:01 PM
67	Git is great :) Not sure why it is such a pain to transfer the code from the unsw gitlab sever onto my local machine.	5/6/2019 11:48 AM
68	I had a lot of trouble setting up my environment, but that could have been for many personal reasons (i.e. my windows computer has never been very good for development; I am an exchange student, so I had previous experience navigating the CSE server, etc.).	5/6/2019 11:10 AM
69	A bit more material explaining the build and configuration system would have been appreciated. Noticed many people just mindlessly compiling and configuring the assignment. I realise this is not the focus/content of the course	5/6/2019 10:56 AM
70	Gitlab was extremely helpful as I was nervous about following the (long) guide on setting up MacOS. With gitlab, I just git cloned by HTTPS and was able to use VSCode right away!	5/6/2019 10:35 AM
71	gdb integration with vscode was handy and I think more people would benefit from know how to do it.	5/6/2019 9:58 AM
72	Good	5/6/2019 9:22 AM
73	N/A	5/6/2019 9:12 AM
74	Macos set up on wiki could be a bit more detailed. Otherwise very easy to use environment.	5/6/2019 8:56 AM
75	A little difficult to work from home without pushing commits to copy over code but it works out ok in the end	5/6/2019 8:27 AM
76	Na	5/6/2019 2:33 AM
77	Git makes it nice to be able to store commits / collaborate with partner.	5/6/2019 2:28 AM
78	It's great already.	5/6/2019 2:27 AM
79	VS Code was good, however something went awry where the system refreshed and my config disappeared, which required an hour to debug. Nothing to be done about this, just something I'm personally salty about.	5/6/2019 2:09 AM
80	I primarily developed on Windows using a share mounted from within a Debian virtual machine in which I compiled and ran the OS. This worked surprisingly well and might be an option to suggest to people next year.	5/6/2019 2:01 AM
81	It was ok	5/6/2019 1:04 AM
82	None	5/6/2019 1:02 AM
83	It is better to specify how to use git, either putting them on wiki or referencing useful webpages.	5/6/2019 1:00 AM
84	Veryyyy nice	5/6/2019 12:33 AM
85	I wish I could work on my home environment (to use a proper editor/IDE) but when following the mac instructions something went wrong that I couldn't fix	5/6/2019 12:23 AM
86	It's fine	5/6/2019 12:17 AM
87	The introduction of asst 0 was not quite clear, took me some time to figure it out what was happening	5/6/2019 12:16 AM
88	n/a	5/6/2019 12:15 AM

89	MacOS + VSCode rocks, strange team though	5/6/2019 12:07 AM
90	I love vscode	5/6/2019 12:06 AM
91	The. Best. Ever. Everything was documented to a tee and carefully described. Gitlab is awesome and very familiar too. Haven't come across a course yet that's organised the build environments to this standard; well done	5/6/2019 12:06 AM
92	spacemacs is <3 `spc-p-g-enter` takes me straight to definition. `spc-p-f--enter` straight to the file, `spc-f-T` opens a neo-tree like window, and it's beautiful. magit plugin makes using git easy-breezy. The only problem is that getting live syntax checking, and configuring the compilation, was non-trivial. Would like to work that out.	5/6/2019 12:06 AM
93	Git is great, thanks for taking the time to switch to it over using an older vcs.	5/6/2019 12:01 AM
94	thank god this course moved to git is all I can say.	5/5/2019 11:57 PM
95	Wiki is a genius idea, but the setup guidance just have too many entries, it confused me somehow when I was setting up the environment for the asst0, maybe you could make the structure simpler.	5/5/2019 11:56 PM
96	Very nice. Only wish the linux setup was better documented for other distros.	5/5/2019 11:55 PM
97	partner had problem with ssh with gitlab, so we made our own git where we collaborated properly. We only pushed the final version back to gitlab.	5/5/2019 11:53 PM
98	Its great	5/5/2019 11:53 PM
99	I wrote some scripts to make life easier, would be nice if they were better integrated for future years Also, please add better documented support for moving around the base directory of the projects (so it's not ~/cs3231)	5/5/2019 11:52 PM
100	the set up for ssh and git sometimes does not work by following the instructions on wiki	5/5/2019 11:52 PM
101	Linux is very useful.	5/5/2019 11:47 PM
102	Feels great about using git to cooperate.	5/5/2019 11:44 PM
103	-	5/5/2019 11:44 PM
104	N/A	5/5/2019 11:42 PM
105	I think the wiki page could be tweaked to make navigating it a bit easier. It was quite easy to miss something while going through the start up checklist. For the group assignment, we used VS Live Share, which is basically google docs for coding. Could be something worth mentioning	5/5/2019 11:42 PM
106	n/a	5/5/2019 11:42 PM
107	Git(lab) is great	5/5/2019 11:39 PM
108	I liked gitlab alot, because its similarities to github	5/5/2019 11:38 PM
109	Emphasising the importance of setting up intellisense to use the os161 configuration files would help. once this was figured out (in vscode) the development process was so much less painful	5/5/2019 11:36 PM

### Summary:

**git/GitLab is here to stay. I'll switch to http in the default instructions to avoid ssh setup and VPN issues for those not interested in optimising their setup.**

**VScode has enough traction to provide further detailed guidance.**

**More gdb guidance seems useful.**

## Q32 How confident were you with the following low-level and general programming concepts PRIOR to the course.

Answered: 301 Skipped: 12

	EXPERT (E.G. > 100HRS)	SOLID EXPERIENCE (E.G. < 100HRS)	SOME EXPERIENCE (E.G. < 10HRS)	LITTLE TO NO EXPERIENCE (E.G. < 1HR)	NEVER HEARD OF IT BEFORE	TOTAL
C programming	27.57% 83	62.13% 187	8.97% 27	1.33% 4	0.00% 0	301
C pointers	19.27% 58	56.81% 171	22.59% 68	1.33% 4	0.00% 0	301
C pointer arithmetic	12.62% 38	45.18% 136	36.21% 109	5.32% 16	0.66% 2	301
Compilation toolchains (gcc, ld)	7.31% 22	31.23% 94	42.86% 129	17.61% 53	1.00% 3	301
Debugging with GDB or similar	3.65% 11	14.29% 43	49.83% 150	26.91% 81	5.32% 16	301
Application programming using system calls	4.98% 15	16.94% 51	38.87% 117	25.58% 77	13.62% 41	301
Assembler programming (on any platform)	3.65% 11	30.90% 93	55.48% 167	8.31% 25	1.66% 5	301
Source code version control with git	24.92% 75	41.20% 124	24.92% 75	8.31% 25	0.66% 2	301
Source code navigation (cscope, gtags, ctags or similar)	8.31% 25	9.97% 30	20.60% 62	23.92% 72	37.21% 112	301

Circled are significant differences to 2016. It appears that the general level of software skills and experience is higher than in past years. A good thing.



### Q33 How confident are you with the following low-level and general programming concepts AFTER the course?

Answered: 301 Skipped: 12

	EXPERT (NOW PART OF YOUR PROGRAMMING TOOLBOX)	COULD USE THE CONCEPT ELSEWHERE WITH A LITTLE EFFORT	NOW ROUGHLY KNOW WHAT IT IS	STILL HAVE NO IDEA	TOTAL
C programming	56.48% 170	40.53% 122	2.33% 7	0.66% 2	301
C pointers	52.16% 157	43.85% 132	3.65% 11	0.33% 1	301
C pointer arithmetic	43.19% 130	49.50% 149	5.65% 17	1.66% 5	301
Compilation toolchains (gcc, ld)	16.61% 50	59.14% 178	19.60% 59	4.65% 14	301
Debugging with GDB or similar	20.93% 63	55.48% 167	19.27% 58	4.32% 13	301
Application programming using system calls	25.91% 78	55.15% 166	17.94% 54	1.00% 3	301
Assembler programming (on any platform)	9.97% 30	67.44% 203	19.60% 59	2.99% 9	301
Source code version control with git	48.84% 147	44.52% 134	6.31% 19	0.33% 1	301
Source code navigation (cscope, gtags, ctags or similar)	20.60% 62	33.89% 102	19.60% 59	25.91% 78	301

12

Students generally improve their software skills as a collateral benefit of doing the course. I am a bit concerned at the students who appear to not have taken advantage of a more advanced editor to navigate the code base.

## Q34 Please provide any comments on the assumed practical knowledge that could improve the course?

Answered: 75 Skipped: 238

#	RESPONSES	DATE
1	Can't assume students have done MIPS	5/16/2019 5:22 PM
2	a little more info on gdb would have been helpful, (like conditional break points which are so useful), also a bit more info on the race file would have been helpful.	5/16/2019 3:46 PM
3	it's just right	5/16/2019 1:10 PM
4	Prior courses well prepare you for this course.	5/16/2019 11:39 AM
5	Need some guidance on source code navigation	5/16/2019 12:49 AM
6	Some practical experience with assembly would be useful to solidify our understanding, I feel	5/15/2019 11:39 PM
7	Na	5/15/2019 11:16 PM
8	Prior knowledge about the os file structure and what goes where.	5/15/2019 10:38 PM
9	A demo/pointers on how to navigate source code in a popular editor (e.g. VS Code) would have been nice.	5/15/2019 8:45 PM
10	n/a	5/15/2019 6:02 PM
11	It was difficult at times but always doable - perfect assumed knowledge.	5/14/2019 1:13 PM
12	No comment	5/13/2019 6:51 PM
13	-	5/13/2019 4:43 PM
14	N/A good assumptions	5/13/2019 2:13 PM
15	More time on going through using gdb and debugging tools	5/13/2019 2:09 PM
16	Not knowing pointers would be disastrous. Assumed knowledge felt sufficient, maybe a do's and dont's list on using pointers correctly (particularly for dynamically allocated data structures)	5/13/2019 1:46 PM
17	N/A	5/12/2019 10:35 PM
18	Maybe on data structures in C? It is kind of implied under C programming, though.	5/12/2019 12:24 PM
19	Everything is fine!	5/12/2019 10:50 AM
20	more gdb help	5/11/2019 10:24 PM
21	Thought it was at a pretty good level	5/11/2019 4:08 PM
22	Have one lecture to do a general overview, although I understand this is difficult with trimesters.	5/10/2019 12:43 PM
23	nope	5/8/2019 11:41 PM
24	Was pretty fair, considering prereqs	5/8/2019 8:02 PM
25	lecture on gdb	5/8/2019 2:50 PM
26	The reference document could be more detailed about the solution design and api coding	5/8/2019 11:35 AM
27	Talka bout what aspects you may work on where in indusetry	5/7/2019 7:33 PM
28	I feel like how to use code navigation tools would have been helpful to go over	5/7/2019 12:26 PM
29	None	5/7/2019 11:48 AM
30	Nothing	5/7/2019 3:31 AM
31	Students could be provided with a greater understanding of how the files relevant to the assignments interact e.g. driver code etc.	5/7/2019 12:52 AM
32	an intro to source code navigation, or atleast direction to resources would've been immensely helpful. Had to work it out on my own.	5/6/2019 9:58 PM
33	Could provide us with a list of the most useful/relevant commands for using GDB	5/6/2019 9:04 PM
34	n/a	5/6/2019 8:43 PM
35	Having done 1521 the MIPS content was a little boring	5/6/2019 6:03 PM

36	The assumed knowledge is quite reasonable for a level 3 COMP course. Students should be quite aware of what they're getting into.	5/6/2019 4:23 PM
37	GDB is hard to use in kernel debugging... so have to write code that won't produce too much error.	5/6/2019 3:27 PM
38	Seems these knowledge are useful for course but not that necessary for assignments as assignments need understanding of system the most.	5/6/2019 1:53 PM
39	More explanation of ctags, etc. This was all gained from the Wiki exclusively.	5/6/2019 1:03 PM
40	None.	5/6/2019 12:52 PM
41	None	5/6/2019 12:27 PM
42	None really. I felt like the assumed practical knowledge was a small enough pool that, even if I had done badly in the prereq courses, I'd have been able to do well in this course.	5/6/2019 12:25 PM
43	n/a	5/6/2019 12:25 PM
44	I'd like to strongly set COMP1521 as the prerequisites of this course. Due to COMP2121 doesn't use MIPS neither introduce syscalls, it would be difficult to follow up at first.	5/6/2019 12:16 PM
45	As a third year student I felt pretty prepared to take this course, didn't feel the need to brush up on anything	5/6/2019 11:59 AM
46	N/A	5/6/2019 11:51 AM
47	more information on the build/configuration system. better git practices	5/6/2019 10:58 AM
48	** pointer to pointer code confused me greatly. Especially how to kmalloc structures using them. This is likely due to my poor C knowledge but something on the wiki might be nice if its a common issue.	5/6/2019 10:03 AM
49	It's fine	5/6/2019 9:41 AM
50	None	5/6/2019 9:24 AM
51	I think spending a little time on how to use gdb in the lecture instead of just letting students learn it themselves could help. The only reason I could learn gdb so quickly was because I had learnt some at the Security Society throughout the semester as well as having a partner who was comfortable with gdb which allowed me to ask for guidance/questions.	5/6/2019 9:14 AM
52	Not sure	5/6/2019 2:35 AM
53	The early lectures repeat a lot of stuff from 1521 (which might be a good thing, idk).	5/6/2019 2:29 AM
54	I think this course is in a good space right now in regards to assumed practical knowledge.	5/6/2019 2:28 AM
55	I came into this 3 years after the relevant C prereqs. I understood this, so assumed practical knowledge levels were fine, however I stand by the idea that a few more implementation examples would've majorly assisted with my assignment efforts.	5/6/2019 2:14 AM
56	N/A	5/6/2019 1:05 AM
57	None	5/6/2019 1:03 AM
58	All good.	5/6/2019 12:35 AM
59	I'm terrible with gdb but that's probably my own fault	5/6/2019 12:25 AM
60	nothing, you go over it anyways so I have no comments really.	5/6/2019 12:17 AM
61	I've got a few years industry experience so I found it quite good but my group partner had some non specific commit messages in git. Maybe a general git etiquette guide would be useful to help encourage people to collaborate and communicate easier.	5/6/2019 12:11 AM
62	Debugging multi-threaded code, or understanding how to keep track across interrupts and syscalls (when you're observing the emulator, ofc) is still intimidating. It would be good to have an option to run on actual hardware. What's the dev environment for that? (AOS beckons)	5/6/2019 12:09 AM
63	Assembler....hard to say	5/6/2019 12:08 AM
64	GDB needs a lecture in itself, I never used it for any assignment. If there was a lecture with you debugging a sample error in ASST1/2/3 it would've been a lot more clear as I could follow along.	5/6/2019 12:04 AM
65	Some videos or references to good videos on things like version control, source code navigation and GDB could improve the course	5/6/2019 12:04 AM
66	I think that c won't be a problem for student taking this course. But the methodology of debugging is really something value.	5/6/2019 12:02 AM

67	Probably worth going into how toolchains work while we're doing asst0/1; it's useful knowledge outside of the course too.	5/6/2019 12:00 AM
68	it was a good level. I did MIPS in 1521 so this stuff was pretty relevant. Maybe spend a bit more time on pointers.	5/5/2019 11:59 PM
69	more detailed tutorial of gdb debugging or other debugging tool and techniques in the os context	5/5/2019 11:55 PM
70	Provid us with some lab exercises	5/5/2019 11:49 PM
71	No idea about this part	5/5/2019 11:49 PM
72	Would be nice to go through a gdb walkthrough in a lecture to explain what we should be looking for to find bugs	5/5/2019 11:48 PM
73	I don't remember hearing anything about ctags/gtags or cscope? Was this something that's exclusive to an editor?	5/5/2019 11:46 PM
74	I was pretty happy with the level of assumed knowledge	5/5/2019 11:45 PM
75	n/a	5/5/2019 11:43 PM

**More debugging guidance is a common theme. I'll work on it.**

## Q35 How would you rate extended OS as a whole?

Answered: 289 Skipped: 24

	EXCELLENT	(NO LABEL)	AVERAGE	(NO LABEL)	POOR	N/A	TOTAL	WEIGHTED AVERAGE
(no label)	18.69% 54	12.46% 36	6.23% 18	1.38% 4	0.35% 1	60.90% 176	289	4.22

**Similar to past years.**

# Q36 Any suggestions for improving COMP3891/9283 Extended OS?

Answered: 58 Skipped: 255

#	RESPONSES	DATE
1	Sample exam papers didn't accurately reflect final exam. Past papers focused a lot on theory while this years final exam asked for pseudo code which was surprising.	5/16/2019 9:14 PM
2	NA	5/16/2019 5:22 PM
3	Have problem sets for EOS that are research focused / a taster of AOS to cement concepts + whether people will enjoy further work in OS.	5/16/2019 10:15 AM
4	Na	5/15/2019 11:16 PM
5	None	5/15/2019 10:38 PM
6	It didn't seem to offer a whole lot more over the standard course (perhaps in large part because of trimesters?)	5/15/2019 10:33 PM
7	n/a	5/15/2019 6:03 PM
8	No	5/13/2019 6:51 PM
9	-	5/13/2019 4:43 PM
10	Lecture slides could be less confusing and I feel like the content went too fast at the start. <b>I still don't know what a kernel is.</b>	5/13/2019 2:44 PM
11	N/A	5/13/2019 2:14 PM
12	Other than improving lecture scheduling so the last few weeks aren't rushed, the course was awesome. The problem is to do with adjusting to trimesters, so not much could've been done to avoid that.	5/13/2019 2:10 PM
13	N/A. Not part of extended OS	5/12/2019 10:35 PM
14	I think it would be good to add more materials in the weeks where there is no lecture. I understand that it is hard to find materials in the early weeks of the course because we haven't gone through some topics, yet. However, I think there are other types of materials that we can go through. I do enjoy the papers that were discussed in the extended lectures, though. Also, with trimesters, I understand that it is difficult to enforce the advanced assignment for the extended OS students but I think it would be better if it is enforced.	5/12/2019 12:30 PM
15	Maybe have a midsem to avoid the whole harmonic scaling at the end which causes too much stress in trimesters	5/12/2019 10:51 AM
16	I haven't done microprocessors and I had to face heavy resistance to enrol in the course. I understand why that is the case, but for postgraduates with a relevant background, the process should be a bit more accommodating.	5/9/2019 11:12 AM
17	nope	5/8/2019 11:42 PM
18	Spend more time on more difficult concepts	5/8/2019 8:02 PM
19	would have preferred proper tutorials as well as extended lectures	5/7/2019 8:41 PM
20	Not sure what can be done re:trimesters and the time needed to learn the course material	5/7/2019 2:40 PM
21	This term it just wasn't very different to normal OS	5/7/2019 12:27 PM
22	NA	5/7/2019 11:48 AM
23	This course is great, trimester might've screwed it up a bit	5/7/2019 5:24 AM
24	I didn't take the extended class.	5/7/2019 12:53 AM
25	Tell us the difference between 3231 and 3891 more clearly	5/6/2019 10:28 PM
26	want tutorial	5/6/2019 7:10 PM
27	What's the difference to standard?	5/6/2019 4:24 PM
28	Maybe cut down on lecture content for trimesters	5/6/2019 4:22 PM
29	Make ext assignment compulsory and directly count to final mark	5/6/2019 3:28 PM
30	N/A	5/6/2019 12:52 PM
31	None	5/6/2019 12:28 PM

A bit concerning...

32	I did not do it so no :)	5/6/2019 12:25 PM
33	n/a	5/6/2019 12:25 PM
34	n/a	5/6/2019 12:00 PM
35	N/A	5/6/2019 11:57 AM
36	more tutorials or content	5/6/2019 10:58 AM
37	- Questions for the extended component	5/6/2019 10:37 AM
38	It's a well run course, Kevin knows what he is doing. PS guide for vscode gdb integration?	5/6/2019 10:05 AM
39	None	5/6/2019 9:24 AM
40	N/A	5/6/2019 9:15 AM
41	More info could have been provided on the advanced components. This is mainly for ass3 as the man pages for ass2 were sufficient.	5/6/2019 3:36 AM
42	Na	5/6/2019 2:35 AM
43	I didn't do EOS.	5/6/2019 2:28 AM
44	Releasing all assignments from the start and treating each due date more like a milestone - where we can pull the new version with the completed previous parts would let us come to grips with the content in our own time more.	5/6/2019 2:16 AM
45	No	5/6/2019 1:06 AM
46	N/A	5/6/2019 1:06 AM
47	maybe make the assignments a bit easier especially Asst3 on VM as this was a rewarding but quite frustrating experience. Besides that I thoroughly enjoyed the course and consider it probably THE most challenging course I've ever done, not for the faint of heart.	5/6/2019 12:20 AM
48	N/A	5/6/2019 12:18 AM
49	Seemed to not have as much content as before due to trimesters	5/6/2019 12:17 AM
50	Make the advanced parts somewhat mandatory again.	5/6/2019 12:03 AM
51	Actually make some of the advanced bits mandatory.	5/6/2019 12:01 AM
52	definitely stay with git. try to space out the assignments better. Too much time for assignment 0 and 1 which could have been spent on 2 and 3 (especially 3)	5/6/2019 12:00 AM
53	Would be nice to make the distinction between OS and EOS clearer	5/5/2019 11:53 PM
54	Only the assignment part was read, really need more time for the course. Go to hell to the trimester.	5/5/2019 11:50 PM
55	-	5/5/2019 11:47 PM
56	n/a	5/5/2019 11:43 PM
57	Some of the lecture slides only made sense within the context of the lecture while being explained. i.e. There were diagrams that made sense in the lecture while they were being explained. However when later looking at the slides there was some ambiguity as to what they were trying to convey without the annotations and explanations provided in the lecture. This is fixed by simply re-watching the lecture, but it would be something nice to keep in mind.	5/5/2019 11:40 PM
58	perhaps still having proper tutorials would help as we have little method for checkin and confirming our answers to the regular tutorial questions	5/5/2019 11:38 PM

Thought about that in the past, but I fear it would end up with building the more difficult parts on an unreliable base for too many students.

Asst0 can't really be any earlier as we still get students enrolling at the end of week 1

The expectation is that if you need tutorials, you probably should not be in EOS.

Q37 We used Piazza as an additional medium for student support. Please choose one of the following.

Answered: 301 Skipped: 12

<b>ANSWER CHOICES</b>	<b>RESPONSES</b>	
Keep using Piazza.	83.39%	251
Get rid of it.	6.98%	21
I do not have an opinion of it.	9.63%	29
<b>TOTAL</b>		<b>301</b>



Q38 Given the large class size, we tried to decrease the noise level in Piazza this term by actively encouraging searchable posts to reduce duplicate posting. Select any of all that apply from the choices below.

Answered: 301 Skipped: 12

ANSWER CHOICES	RESPONSES	
Piazza seemed less noisy than my previous experience	33.89%	102
Piazza was more searchable than my previous experience	50.50%	152
Piazza was better than my experience with other forums	51.16%	154
Piazza was too cluttered to be useful	7.97%	24
I struggled to find what I was searching for	9.30%	28
I did not use Piazza at all	3.32%	10
Other (please specify)	9.30%	28
Total Respondents: 301		

**The only scary comment was the 3% that did not use the support mechanism at all.**

**On a positive side, only 8% found it too cluttered. Not bad given around 400 students in the course.**

#	OTHER (PLEASE SPECIFY)	DATE
1	It was good, on par with some other courses.	5/16/2019 9:43 PM
2	About the same. A lot of people definitely weren't searching before posting. But the posts were (mainly) searchable	5/16/2019 12:00 AM
3	Very useful for general browsing	5/15/2019 11:55 PM
4	It was fairly noisy but I could still navigate through the forum	5/15/2019 6:03 PM
5	I used Piazza less and less over the course of the term	5/15/2019 5:06 PM
6	It was on par with previous experiences.	5/14/2019 5:02 PM
7	Piazza is terrible — it's stupidly annoying to set up, it's a painful UX, it's worse than WebCMS3 forums, and it discourages participation by being an external site to CSE. I don't want to have to learn how to use Piazza in order to do well in the course (additionally, I dislike Piazza as a company).	5/13/2019 2:46 PM
8	Anonymity option is a good idea, ask more Qs	5/13/2019 1:49 PM
9	I liked it solely for the ability to "like" a post so that I could show some attention to it. I was not an active poster so yeah thanks for the people who did respond to questions!	5/12/2019 10:37 PM
10	There seemed to be less use of Piazza in this course than in my experience with a few other courses	5/11/2019 11:57 PM
11	I don't like piazza but I like having a forum, so maybe find a new forum program	5/11/2019 11:18 AM
12	Got cluttered at points	5/10/2019 5:26 PM
13	Piazza was spamming my email	5/10/2019 2:42 PM
14	I think struggling with search mainly comes from the mechanics of the piazza search algorithm. With not a whole lot of extra effort I could find what I was looking for	5/9/2019 10:02 PM
15	About the same	5/8/2019 9:07 PM
16	it worked well but not the best system	5/8/2019 2:03 PM
17	It was decent - i've never used Piazza before and it is better than a moodle forum.	5/7/2019 4:32 PM
18	I do a double degree in Eng and Comp Sci which means I have three forums to keep track of: Moodle, WebCMS3 and Piazza. It generally results in me dropping off my usage of the last two. I've also never used Piazza before so can't compare it to previous years	5/6/2019 10:38 PM
19	Have not had previous experience with forums/piazza	5/6/2019 6:05 PM
20	I used it infrequently and only for specific questions, so I don't have an opinion about how cluttered it was.	5/6/2019 4:29 PM
21	It seemed fine, but I have never used Piazza before	5/6/2019 12:26 PM
22	It was useful, but still the number of posts during assignment periods was very high. While people were able to search easily, it seems some people posting did not bother	5/6/2019 9:49 AM
23	First time using piazza	5/6/2019 8:17 AM
24	I really appreciated piazza	5/6/2019 3:38 AM
25	I found the tags and references to similar questions especially helpful.	5/6/2019 2:17 AM
26	It was fine	5/6/2019 12:27 AM
27	Don't have much to compare against	5/6/2019 12:10 AM
28	Specific to the app, the @post# links don't work, and would be useful if the post title was also included by convention	5/6/2019 12:02 AM

**Generally positive.**

**I have already contacted Piazza making suggestion about their search functionality. The good news is that they are responsive, and some suggestions have already be incorporated!!!!**

## Q39 Any comments on the use of Piazza?

Answered: 112 Skipped: 201

#	RESPONSES	DATE
1	It is pretty useful. When I have questions on course materials or assignments, I can just search for what I want.	5/17/2019 4:04 AM
2	Keep using it	5/16/2019 5:23 PM
3	Ugh.	5/16/2019 4:54 PM
4	maybe pin clarifications on specks and stuff.	5/16/2019 3:49 PM
5	the search isn't very good especially for technical help because words vary a lot	5/16/2019 1:12 PM
6	Please use something else, the ads were really annoying. I found it really hard to navigate and questions that I wanted to follow up were lost etc. I have eduroam or something like that in 1511 and really liked it	5/16/2019 11:52 AM
7	I do find the website a bit cluttered and I do get flooded with email notifications from Piazza, which is not ideal (probably my fault for not investigating how to turn them off though). That being said, I found Piazza to be an invaluable source of information.	5/16/2019 1:30 AM
8	it always send me email which is a bit annoying	5/16/2019 12:43 AM
9	Na	5/15/2019 11:16 PM
10	The mobile app didn't have many features so I found it really hard at first. And it just became an aversion.	5/15/2019 10:39 PM
11	Ed the Digital Learning Platform (used by COMP1511) is cleaner, more mobile-friendly, and easier to navigate/search through; Piazza is ok, but Ed is better.	5/15/2019 8:51 PM
12	Perfect, keep doing it	5/15/2019 6:03 PM
13	Piazza has an ugly interface, I might have used it more if it looked better	5/15/2019 5:06 PM
14	I couldn't figure out how to search for a string and filter by a tag (e.g. asst2) simultaneously.	5/14/2019 5:02 PM
15	I also tutor 1511 and Piazza for 1511 is very cluttered (unavoidable with first years). <b>The OS forum was good because posting rules were established early and largely followed.</b> I don't think it's particularly thanks to the Piazza platform, it functions largely the same as any other.	5/14/2019 1:13 PM
16	I think it helps students, whether they are actively participating or just lurking.	5/14/2019 11:55 AM
17	It is good, please keep using it.	5/13/2019 6:52 PM
18	I found it a bit difficult to navigate	5/13/2019 4:44 PM
19	Just use WebCMS3 forums.	5/13/2019 2:46 PM
20	It can see the feedback immediately.	5/13/2019 2:28 PM
21	It's great keep going	5/13/2019 2:15 PM
22	Not my favourite forum to use, but encouraging searching to prevent duplicates worked well	5/13/2019 2:11 PM
23	Incredibly useful	5/13/2019 1:49 PM
24	N/A	5/12/2019 10:37 PM
25	none. It was much better than Moodle forums	5/12/2019 1:27 PM
26	I think it was very well managed and the replies are given really quickly either by students or course admins. It was a great experience as I've never used Piazza before.	5/12/2019 12:33 PM
27	Great way to find help and search for answers I had trouble with	5/12/2019 10:52 AM
28	platform itself was a bit annoying to navigate sometimes	5/11/2019 10:25 PM
29	Thank you so much for being so responsive to student comments and questions! Another course I am in used Piazza this semester, and the responses from lecturers and tutors were a) incredibly slow, and b) pretty unhelpful. While that was frustrating, the interesting thing is that students were much less likely to engage. I suspect that because you were so helpful on Piazza, students were also more likely to engage and help each other out.	5/11/2019 4:10 PM
30	Make an os subreddit	5/10/2019 5:26 PM
31	Again, Piazza constantly spammed my email inbox even after I set the	5/10/2019 2:42 PM

Because they provide little help for staff to know when posted are resolved. "Forums" are an awful medium on the support side. I would not be as engaged if it was just a forum.

	notification frequency to never. <b>Why use Piazza when moodle or even webcms have a good enough forum system.</b> If you're looking to avoid spam posts from already previously answered questions, I venture to say that Reddit would be a better choice	
32	Prefer the moodle forum interface to the piazza interface. It is much clearer and easily accessible.	5/10/2019 12:44 PM
33	search function is very primitive	5/10/2019 2:22 AM
34	so much better then moodle forums	5/8/2019 11:53 PM
35	good	5/8/2019 11:42 PM
36	it was somewhat hard to search what exactly my problem was, and evaluating how similar my problem was to someone else's was somewhat difficult. but i suppose this problem is somewhat universal.	5/8/2019 9:00 PM
37	If it could be monitored more closely by tutors around deadlines and early bonus deadlines	5/8/2019 7:10 PM
38	Was good overall, but didn't find it any more useful than other forums. Many posts made it crowded, but this is inevitable and the coordinators did well to categorise and monitor posts.	5/8/2019 6:26 PM
39	Way better then moodle forum. Better searching. Minimal duplications. Can easily refer other forum posts. I mean it was the best. :)	5/8/2019 4:48 PM
40	it works well but I dont think it is the best. It would be awesome to encourage students to also post student explained content. A student sat me down and explained virtual memory to me in his words. It was the awesome explanation and really helped me	5/8/2019 2:03 PM
41	I still prefer WebCMS3 but I have to say this course did well with Piazza. However Algos and some other course use different university emails to log in to Piazza? I had to keep swapping logins for different courses. Needs to be a CSE standard.	5/7/2019 8:01 PM
42	Fantastic. Recommendations: To create a mega-thread for all FAQ	5/7/2019 5:08 PM
43	Generally quite good for our purposes in this course.	5/7/2019 4:32 PM
44	Great! I love how tutors referred me to Piazza for other questions I might run into with my coding style.	5/7/2019 4:01 PM
45	Makes searching easy	5/7/2019 3:41 PM
46	It was very useful and active so I could find information easily	5/7/2019 12:28 PM
47	None	5/7/2019 11:49 AM
48	Good. A little noisy	5/7/2019 3:32 AM
49	I dont like piazza in general because the user interface is not so good. Even with all the rules set by Kevin, the search function is terrible and it is a pain to find things. I must use extremely precise keywords to find what I want. Note that the above are issues with piazza and has nothing to do with the course content. The rules set by kevin are really important and I believe it must be kept in place in the future. I remember when I was doing 1511 with andrew taylor he used a platform called Ed, that platform is much better, but for some reason all the courses are using piazza instead of ed	5/7/2019 2:12 AM
50	Generally was useful - appreciated the time that staff took to answer questions	5/7/2019 12:53 AM
51	It was very helpful in having any course or assignment-related questions clarified and the instructors were very prompt in answering.	5/6/2019 11:28 PM
52	Piazza, Wiki and Course website -> 3 sites for one course. Add that to Moodle, WebCMS3 and it wasn't fun keeping track of everything I study. Piazza isn't in itself bad though. Just wish there was a way to centralise more info	5/6/2019 10:38 PM
53	Very good! Answers were very prompt and informative. I learnt a lot from reading the questions and answers.	5/6/2019 10:32 PM
54	Setting up a "search for partners" section was great. Found a great partner and we worked super well :) Thanks to the tutors and Kevin for incredibly prompt replies. I'd definitely recommend leaving in the Piazza etiquette - lack of bitmaps definitely made it easier to search for things.	5/6/2019 8:44 PM
55	its crappy adware	5/6/2019 7:31 PM
56	Not a fan of Piazza as a platform but a class forum is useful, especially for a course like this where students would often have very specific questions. <b>I appreciated the facetious poking fun at students that didn't follow the (very simple and common sense) rules.</b> Unfortunately, expecting every student to have the capacity to read and follow basic instructions would never work out, but it was handled well.	5/6/2019 4:29 PM
57	Much better than Open Learning (which is way too cluttered). Good place just for Q&A and forum talk!	5/6/2019 4:16 PM

Haha, I have to avoid going nuts somehow :-)

58	Love piazza. Very useful, always found people with the same problems I had which had already been answered.	5/6/2019 2:25 PM
59	Piazza is the lifesaver for doing assignments. Really useful. Please keep using it.	5/6/2019 1:56 PM
60	Edstem seems better. but piazza is okay. the GUI is too old fashion...	5/6/2019 1:55 PM
61	Search features are great. The job advertisement stuff can get annoying at times.	5/6/2019 1:04 PM
62	I used Ed in COMP9021 and I liked it better. Piazza was not bad, but sometimes it was crazy cluttered	5/6/2019 1:01 PM
63	None.	5/6/2019 12:52 PM
64	None	5/6/2019 12:29 PM
65	Nop	5/6/2019 12:26 PM
66	n.a	5/6/2019 12:26 PM
67	Awesome, great for any programming course, wish I had it in all my previous classes to get answers to little questions that don't justify going into lectures for	5/6/2019 12:01 PM
68	N/A (Never used it, wasn't much use for it)	5/6/2019 11:58 AM
69	Piazza was comparable to other experiences that I have had with it; however, the rate of response from the lecturer and tutors was remarkable, and I can't express how much I appreciated it.	5/6/2019 11:14 AM
70	excellent use of piazza. was by far the best offline course support I have ever seen or heard of	5/6/2019 10:59 AM
71	Piazza was so easy to use and find what I was looking for. It was helpful that I could also archive and get rid of comments that were not relevant to me. This way I could easily find useful comments	5/6/2019 10:39 AM
72	It was a great place to ask questions - the response time was great!	5/6/2019 10:32 AM
73	All good	5/6/2019 9:25 AM
74	Please keep using piazza! The anonymity to other class mates really helps me to speak out when I don't understand a concept and I don't have to be embarrassed about it! It is a great platform with an easy to use search bar (The search function on the webcms forum is awful) and in general Piazza is just a great platform.	5/6/2019 9:16 AM
75	Sometimes using the product is a very frustrating experience (feels buggy, can't find stuff). I used edstem (I think that's what it's called) for some courses and I like it much better.	5/6/2019 9:01 AM
76	Responses were generally quick and helpful and it was easy to find related questions	5/6/2019 8:30 AM
77	Not a fan of the forum being separate entity from the course page. Webcms has plenty of faults however forum integration to each lecture/assignment item can make ignoring certain 'noise' a lot easier and help classify posts rather than dealing with piazzas scroll heavy sorting.	5/6/2019 8:17 AM
78	I personally it's a great tool to communicate with the lectures and tutors	5/6/2019 7:52 AM
79	It was really nice to have help readily available as this is not always the case in other courses.	5/6/2019 3:38 AM
80	I know I've already said this, but replace it with Discourse! It's more modern, it works on phones, it allows for proper discussions when there is more than one answer, it has better searchability, and so, so much more. And it's open source, and doesn't keep reminding me to upload my resume to "Discourse Careers".	5/6/2019 2:37 AM
81	Na	5/6/2019 2:36 AM
82	Very good tool.	5/6/2019 2:28 AM
83	No, was good.	5/6/2019 2:17 AM
84	Piazza has a bug that whenever you searched something about 40% of the time, no search result appeared and it just stayed on the landing page for the course. Often would take minutes of hard refreshing(removing cache) to fix.	5/6/2019 1:28 AM
85	- A great way to ask questions to students and course admins - A great way to search for related questions that help clarify lecture points and assignment work	5/6/2019 1:19 AM
86	Piazza looks not well-organised. Every time I log in, the questions showing one the very left are not obvious enough.	5/6/2019 1:08 AM
87	Good	5/6/2019 1:06 AM
88	It really helped when I got stuck with issues, solution was already there as someone else had experienced the same issue..	5/6/2019 1:06 AM
89	Make sure other students are aware that they can change their email notification settings. Many complained about how many emails they got because of piazza	5/6/2019 1:00 AM

**Yes, I'll look into that. Seems a lot of complaints can be fixed in settings.**

**but were unaware it was easily fixed.**

90	Maybe have more sub categories within each assignment so much easier to find things like error or maybe general questions about asst	5/6/2019 12:57 AM
91	Keep using it and let it stay like this.	5/6/2019 12:36 AM
92	The forum is good but I don't like Piazza specifically (have had better experience with ed etc..)	5/6/2019 12:22 AM
93	Some people may find webcms forums better as you could sort threads according to different categories so it might better suit crammers wanting to check posts on topic "X" but I check it daily so for me I have no problems finding what I want. 1000% keep using it, I think all courses should adopt Piazza.	5/6/2019 12:22 AM
94	No	5/6/2019 12:19 AM
95	Posts easy to search. But the medium as such was not very user friendly	5/6/2019 12:15 AM
96	It's far better than the crappy course forums on WebCMS. Things are readable and easy to find.	5/6/2019 12:12 AM
97	Don't know whether it's better than Edstem	5/6/2019 12:11 AM
98	More code snippets could have helped especially which file they should be in. I had trouble knowing how to express your words as code a lot of time and could never bridge the gap between my knowledge. Giving out jigsaw pieces in the form of code snippets for the students to join together and learn while doing so, can be better than throwing them in the deep end where they can misinterpret what you say.	5/6/2019 12:10 AM
99	Yes yes yes yes	5/6/2019 12:10 AM
100	Thanks for taking a stand against evil bitmaps	5/6/2019 12:04 AM
101	good	5/6/2019 12:04 AM
102	Is there a delete posting button?	5/6/2019 12:04 AM
103	Mmm, Pizza...	5/6/2019 12:02 AM
104	Piazza was great honestly. Keep using it, I used it to answer and ask questions. Really made the course feel like a community	5/6/2019 12:01 AM
105	Very awesome. The tutors should be more active on it (Jasper has been super active so I mean the other tutors)	5/5/2019 11:56 PM
106	Piazza is a great tool for students and lecturers to give advice and help.	5/5/2019 11:55 PM
107	I really don't like it, but I'm not sure there's a better alternative.	5/5/2019 11:55 PM
108	Very useful. I can find many questions that I want ask on Piazza. They always have solutions from students and tutors.	5/5/2019 11:51 PM
109	Just good	5/5/2019 11:51 PM
110	This was one of the best ways to debug for assignments. Please keep using it.	5/5/2019 11:48 PM
111	maybe can use Ed	5/5/2019 11:44 PM
112	Pizza is good	5/5/2019 11:41 PM

**Ed seems an alternative, I might have a look, but I don't want to make too many changes in a single year.**

**I can efficiently contribute on Piazza, I don't want to lose that.**

**Search has improve (I gave them feedback). Hopefully this will encourage more search first behaviour.**

**Spammy-ness should be fixable in settings.**

**I encourage use of the web interface primarily. The apps are pretty rudimentary.**