

Informatics Student Course Feedback 2017/18

<http://www.inf.ed.ac.uk/teaching/surveys/2017-18>

This report contains feedback from students about a course taught in the School of Informatics during the 2017/18 academic year, in response to the following questions:

- What would you say to students interested in taking this course?
- What did you find most valuable about the course?
- What improvements, if any, would you make to the course?
- Please add any other comments you have about workshops and tutors

Each course organiser receives this report as well as statistics on multiple-choice responses. All these reports, together with student feedback about individual members of teaching staff, are collected and sent to the Director of Learning and Teaching.

Please note that these are personal responses from individual students: some courses only have a few responses and a small sample can be unrepresentative.

Stereotyping and bias, especially unconscious bias, is a serious concern in any survey gathering personal responses. All students received the rubric below before completing the surveys, and you can read a brief introduction to issues of unconscious bias on the university web pages at <http://edin.ac/2iypZBv>

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Rubric given to all students taking the end-of-course feedback survey

We value your opinions on the courses you take here at the University, as they allow us to shape future delivery and development. We welcome constructive comments about your courses, whether positive or negative, and ask you to give details about any issues in order to help the course organiser to understand and address them.

We encourage you to be aware of the potential for bias in the completion of these questionnaires, so we have developed resources which may be helpful to you:

- Equality, Diversity and Unconscious Bias (<http://edin.ac/2iypZBv>)

You also have a responsibility to provide feedback in a manner which does not breach the University's Dignity and Respect Policy:

- University of Edinburgh Dignity and Respect Policy (<http://edin.ac/1Cq0VZY>)

The results of the questionnaires will never be analysed in a way that seeks to identify individual students from their responses. However, should you wish to remain anonymous, please do not identify yourself in your answers to the survey questionnaire implicitly or explicitly.

Comments Report

What advice would you give to a student taking this course in future?

- As Boris mentioned tons of time, start with the assignments early! Revise throughout the semester, as topics build on each other, hence not understanding one topic immediately prevents you from understanding the other.
- Be more careful when selecting tutors
- Be prepared for a course that feels like double the amount of credits it is advertised for. It is a lot of work but amazingly rewarding in terms of learning how actual computers work.
- Be prepared for the fact that the course is demanding. Start assignments early.
- Be prepared to work, start the assignments as soon as you get them. Do the tutorials
- Brace yourselves.
- Brush up on your C.
- Courseworks are really interesting but take longer that you may expect,
- Definitely start learning about MIPS from the very beginning, otherwise you will feel bad.
- Do the assignments as soon as you can to get the help you need in case you need it. Don't overestimate your understanding of the material like I did because it will take A LOT of time whether you understand it or not.
- Don't panic about the coursework, just try your best, It will all fall into place once you start making progress.
- Don't start this coursework just before the deadline. The programs are very unpredictable to know how long it will take to debug. Last minute starts will almost guarantee you submitting a program with bugs. With a lot of time the coursework is very easy and you can easily expect 90 to 100 but only if your program works by starting early.
- Don't underestimate coursework 1
- Expect this course to be super-hard however when getting it done you will feel that is 10 credits you fully deserve. Take time to think a lot rather than directly starting to write code or rush through material because things can get very confusing easily next time you see. Slow and steady wins
- Having some prior exposure to MIPS will be very helpful.
- It is very challenging and the coursework requires a lot of work so don't go in thinking you'll manage to do it all in one night
- It's a great course which covers a variety of topics taught by a very enthusiastic lecturer.
- It gives you an insight into the way hard- and software work together.
- It's nice, with a lot of work.
- Make notes in lectures as you can't always rely on recordings.
- Read the textbook. Start the coursework early.
- Read up everything beforehand, lectures barely touch up on topics
- Start assignments early, pay attention
- Start coursework 1 as soon as it's out, it will take you the whole time up until the deadline, try and balance this with the other courseworks and prioritise passing as many tests as possible while having clear, commented code. Keep up with the readings, the book and other students are often more helpful than the lectures.
- Start coursework1 straight away and try not to let it overwhelm you.
- Start early on the MIPS coursework, otherwise you'll be spending your nights in Appleton till 9AM.

Comments Report

What advice would you give to a student taking this course in future? (continued)

- Start the assignments as early as possible, and be prepared to spend more than 10 hours on them.
- Start the coursework as soon as it's released
- Start the coursework early.
- Start with the coursework early if it's not your habit, read more on your own as this is a really interesting subject compressed into 2 lectures, 0.5 tutorials a week.
- Take it because Boris is great, and the subject is super interesting.
- Take it if you can code! If you want something easy, do 2C-SE, but this course is incredibly rewarding. You will love the lecturer, Boris Grot. He is the best lecturer in so many ways: so relatable, so fun, so enthusiastic about the course, and such a good teacher.
- Tough course, do start coursework early, the textbook and piazza are very useful
- Try to keep ahead of the reading: the course moves pretty quickly, so it's a good idea to stay ahead. Get some practice with MIPS before the first coursework starts as you are throw in at the deep end.
- Work hard on the coursework.
- despite it being a 10 credit course it has the workload of a 20credit course it is however a very good course and I definitely enjoyed it and learnt a lot

Comments Report

What did you find most valuable about the course?

- Assessed assignments, lectures.
- Boris is probably the most engaging lecturer you will ever have. Inspiring, fun, relatable.
- The professor is responsive on Piazza, and really willing to help.
- Boris.
- Boris. Getting into the nitty-gritty. Processor Design.
- Coursework structure, although they were quite challenging and hard, I really liked that we had to work with partially written code which is what you usually do when doing a project. So, we had to take time to actually understand someone else's code. It would be very helpful if this aspect of coursework is stressed more
- Courseworks were nice and challenging
- Essential course as part of the Computer Science program
- Every aspect, from learning how near-to-metal programming is done to how the very hardware these codes run on are designed and enhanced.
- Everything.
- General knowledge about computer systems is vital in bridging the gap between only programming and knowing how hardware actually behaves and the reasons behind it, this was done beautifully in the course
- I absolutely loved learning more about the basics of computer systems, built on of my previous knowledge only from books. I am also really eager to continue this kind of coursework by taking Computer Architecture and Operating Systems as I found it really interesting.
- I honestly don't know. I adored MIPS, was enamoured by processor design and loved the lectures on virtual memory and caching.
- I think all topics are very important things to know as a computer scientist
- Incredibly interesting introduction to computer systems. Learn a lot of new skills, including MiPS and C.
- It was really interesting to learn something about the connection between hardware and software which isn't really the case in other courses.
- Learning C and MIPS programming.
- Learning MIPS assembly and C programming.
- Learning MPIS and C, also knowledge about processor
- Learning about how a computer processes and deals with information
- Lectures
- MIPS was a great experience. Nice to finally see C. Learnt quite a bit!
- Other students, speaking to other students about the courseworks and content has been more helpful than posting on piazza. Probably my classmates. Other students on the piazza forum etc. have been the most helpful thing for me.
- Programming assignments, Overall course material
- Recorded lectures, lab sessions with demonstrators
- The assignments. Getting my hands dirty by implementation was the crucial part of me actually understanding the topics.
- The lectures. They lectures were phenomenal. The pace was just right - challenging and yet such, that I was able to understand each topic in detail.
- The breadth of the material covered - the chance to get an insight into the low level features of computers has been very interesting
- The coursework was really good. For some of the other inf2 classes it just felt like you were filling in the blanks, but in the inf2c coursework you actually created things from scratch which is far more satisfying.

Comments Report

What did you find most valuable about the course? (continued)

- The crossover between hardware. I've never thought about what happens in the computer when we use it so it was good to gain some insight into these matters. The lecturer was great, very enthusiastic and engaging.
- The lectures
- The lectures - learning about computers from the level of assembly to logic gates, and then back to the operating system.
- The lectures, which are not only helpful but entertaining, but the assignments are absolutely essential to make sure we understand well the material.
- The understanding of the low-level operations of computers it gives.
- This gives you a very good basic background of how computers operate, mainly with the hardware side of things. This is the only course I liked and found interesting in that particular semester. The MIPS Assembly language gives a good introduction to how the cpu operates and your understanding of computer science truly comes from this course despite being only 10 credits.
- slides and notes
- the tutorials
- assignments were also a good learning experience

Comments Report

What improvements, if any, would you make to the course?

- A bit too much content for a 10 credit course
- A lot of work for a 10 credit course. Ended up behind in lectures, so lecturer trying to cover more content each lecture would be good.
- Consider modifying the curriculum and making it a 20-credit course. If the course should stay at 10-credits, the coursework should take up less time than it does currently.
- Coursework 1 is too hard and too time consuming, this needs to be addressed.
- Being (sometimes as many as 4 lectures) behind has been really stressful as we approach exams, as a student that really has to study to understand this content, i am worried that these last minute learning outcomes are going to prove difficult for me to be able to answer questions on in our exam.
- The lecturer was told "just to make everything perfect" when he was a student, and in response to a request for a rubric for the first coursework, he replied "Why wouldn't you strive for perfection regardless of how many marks are allocated for each part". This is not only unreasonable for many students as we all have different strengths and limits on our abilities but this also adds to the feeling from this lecturer that asking questions, being confused, and getting stuck were not what was expected from us. On several occasions students in class, were told if you see this and don't understand "it's too late to drop the course", this does not build a friendly and safe environment for our learning, and caused many to be embarrassed to ask and rely on each other for getting through confusing topics and/or coursework assignments.
- This course is interesting and full of content that I would love to learn fully, the way this course has been delivered has taken away from these positives and left me confused and often embarrassed, it's a shame that this course could fall so much when simple things, like delivering the lectures on time, and without unnecessary comments could make all the difference to someone's learning and understanding.
- Coursework is quite lengthy and takes too long, reduce time required to complete to scale to a 10 Credit course.
- Coursework was poorly thought out, with so few examples making it almost impossible to even start, even with 20+ hours of work. This with the fact it was set whilst there were many other courseworks being set from other subjects, and the second piece being so close to Christmas exams caused large amounts of stress and meant I got very little value out of them.
- Lecture slides/recordings were not very useful, with slides leaving out important details, which required watching the recordings. However blackboard work in the lectures was always out of shot of the recordings so when reviewing work I constantly felt lost.
- Coursework1 was Far far far too time consuming and difficult. I did not feel at all like the class prepared me for the assignment, and doing this assignment completely set me back in keeping up with the content in the lectures and in all my other classes, which i feel is completely unreasonable given that this is a 10 credit course.
- All semester we have been very behind in the lectures such that we have only learned content for a tutorial the following morning more than once.
- I have also felt a bit intimidated by the lecturer. I feel embarrassed to ask questions that I think might be stupid. When several students asked on piazza for some sort of grading breakdown for coursework1 in order to help prioritise their time between it and other courseworks and classes, he replied saying that you should "just make everything perfect" so it won't matter what marks are awarded for what. If we were all perfect there would be no need for this class, and I just felt like this was quite an unfair response to a genuine question that a lot of people had, and made me feel even more overwhelmed by the coursework.
- Don't fall behind the schedule :)
- Have lectures run closer to schedule, rather than falling slightly behind
- Have tutorials every week.
- I think the course should stay as it is, however it is definitely more work than a 10 credit course should be. So I think it should either be upgraded to a 20 credit course, or have the workload reduced.

Comments Report

What improvements, if any, would you make to the course? (continued)

- If more time was spent explaining concepts that were taught after 5
- In my opinion, it should be a twenty credit course given the demanding coursework and the volume of material covered (I feel that it is 10 credits just so that students can take both Inf2C courses). When we felt behind (in week 2-3), I feel that the lecturer could have addressed the issue better since it influenced the coursework and the tutorials. I think that it took quite a long time in the lectures before we actually started doing new material which made it quite rushed and we never caught up.
- It'd be useful to fit into the schedule better. The lecture recordings were cut off at: 00 minutes, which sometimes left out some important information at the end. The first coursework could be made more enjoyable, because a large part of it consists of just mechanically translating C statements into assembly instructions. The second coursework was much better in my opinion.
- Less memorisation-intensive exam. More focus on skills. Expand the course and make it 20 credits.
- Make it 20 credits and provide more support
- Make this a 20 credit course and compulsory instead of inf2a to more students pursuing joint degrees. This is very fundamental to the understanding of computer science. The operation of the processor wasn't well explained with confusing diagrams.
- Maybe clearer slides.
- More lab demonstrators, they very often tend to be preoccupied with other students, due to the imbalance of demonstrators to students
- None! This course is good because it's clear that the lecturer actually *cares* and is passionate about this course.
- Not make the coursework quite so intense. It feels like 20 credits' worth.
- Quality of the tutorials, my tutor was not capable to clearly explain course content
- Spend more time going through MIPS assembly before giving us the first assignment. It took me 40 hours to complete it.
- Taking less time for initial data representation lectures. To be honest most people starting this course do already know about it, also the content is not very hard. So instead by directly starting with MIPS and let people learn from reading materials would be enough. And this would make it easier to keep on schedule
- The feedback for the assignments is too superficial and doesn't help us understand where we went wrong.
- The first coursework (MIPS programming) is far too demanding in terms of hours that need to be put into for a 10 credit course, so I suggest making the task at hand smaller or moving the deadline from 2 weeks after release to 3 weeks after release.
- The first coursework was too hard, something easier would have definitely been enough to understand how assembly works.
- There's a bit of me which would have liked additional feedback from the coursework. However, given the number of students in the course and the time/resource constraints, I can understand if this is not feasible.
- This course should be a 20 credit course.
- This should be 20 credits course.
- Try to stay on schedule more, spend less time reviewing previous lecture (but it is still useful to do this to some level)
- Unfortunately we were behind by two lectures and I think the course content and assignments justify this being a singular 20 credit course. This would give more time for the assignments as well as more time for lectures which would be really helpful.
- better time management because we hadn't learnt all the relevant material before the assignments were out

Comments Report

Please add any other comments you have about workshops and tutors

- Because we fell behind, it wasn't great for the tutorials because we often studied the material only a day before my tutorial. Also I'd appreciate labs on C before the assignment to get more practice with it. For example in Inf2A, there were labs for Python and NLTK which were needed for the assignment in weeks 3-4 parallel with lectures. I just think that 3 lectures on the theory (which wasn't that detailed) without practice isn't enough to get a real understanding on the programming language
- Depended on the tutor. Only having tutorials every other week also felt too sparse.
- Having one workshop in 2 weeks is not enough and it is difficult to remember to turn up to them if it's not every week. At least 30 mins a week is better than an hour in 2 weeks.
- I'd say the tutorial questions were not challenging at all, a higher level of difficulty would be better.
- Jose Cano Reyes knew the content very well and was able to answer every question which really helped my understanding.
- My tutor was not prepared and was definitely not explaining the subject rather than just copying the answers. I did not take anything from that even though I thought it would help. She was young, probably student on Tuesday session, so I may understand, but I expect at least good knowledge about the topic when someone teaches it.
- My tutor was very good. There haven't been many tutorials, I would welcome having one every week. Although not in exchange for the assignments.
- One tutorial every 2 weeks is clearly not enough for a course that demands as much time and work as a 20-credit one.
- Only having tutorials every other week was pretty inadequate for the amount and complexity of the topics in class, and I felt that my tutor did not feel very confident about the topics himself and a lot of the time was unable to answer people's questions.
- There is a lot of content to only have 4 tutorials for the whole semester. Our tutor (although new to tutoring the course) struggled to answer our questions and often seemed to not understand the content himself, which only made these limited tutorials more unhelpful.
- There were way too few tutorials - they help immensely, but when there are only four a semester and they last only 50 minutes, there's only so many questions you can ask, even though you probably have loads
- Tutorials should really be weekly rather than bi-weekly. There is so much content covered throughout the course which often results in little coverage of the same material in tutorials and a great deal of time pressure to finish all questions within the hour. The latter often results in rushing through all exercises, if all are covered in the first place.
- Tutorials weren't t very good, the content didn't seem to follow the timeline of the lectures, too few tutorials
- Was very easy to go to a lab and only get 2 minutes with the demonstrator which often didn't give you answers to your questions. Workshops were somewhat beneficial
- more lab sessions or more demonstrators at a lab session during coursework