Informatics Student Course Feedback 2020/21

http://www.inf.ed.ac.uk/teaching/surveys/2020-21

This report contains feedback from students about a course taught in the School of Informatics during the 2020/21 academic year, in response to the following questions:

- What advice would you give to a student taking this course in future?
- 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, tutorials or labs on this course.
- Please add any other comments you have about the presentation of course materials online and their accessibility.
- Reflecting on your experience of hybrid teaching and learning on this course, what has worked well for you?
- Is there anything else you’d like to tell us about your experience of hybrid teaching and learning on this course that would help us improve our approach?

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.
1. Discrete Mathematics and Probability

1. What did you find most valuable about the course?

- Designing the course around the textbook keeps me organised.
- Found the overall content of the course interesting.
- Good rundown of fundamental maths skills, weekly format kept you engaged, and it was consistent so that you were never overwhelmed.
- How it links with my other courses
- How to prove a formula and statistics
- I appreciate the introduction to probability and more rigorous types of proof.
- I learned a lot about probability in the second part of the course.
- I liked the way the quizzes were formatted on webAssign this year as it means we do not have to redo the entire quiz each time we make a small mistake and we are able to correct our answers up to three times if we make a small mistake or do not understand the question the first time.
- I think the pace and the content is suitable. It was not difficult to keep on top. I liked having two assessments for the two parts of the course.
- I thought the first part of the course on discrete maths was delivered excellently. The lecture videos were very clear and concise with relevant textbook reading and exercises allowing me to make notes most relevant and tailored to me.
- It forced me to learn how to not rely on course materials and lecturers for my own learning, due to the complete lack of high quality materials
- It provides me some ideas that helps me when I tackle other courses.
- Learning proofs. Why you don't teach this in year 1 when the year 1 courses actually require it is beyond me.
- Maybe discussions with classmates during the tutorials.
- Mrs. Yorston and her ability to explain the topic very well.
- Nothing at all.
- Proof methods and different distributions.
- Teaching me math skills which will benefit my cs skills.
- The Discrete Mathematics part is quite good, but the Probability part is ... I do not know how to say....
- The course content is essential for later computing concepts, so the content will be valuable for courses such as Data Science
- The course let me discover the utilisation of Mathematics in Informatics.
- The course was very well structured and there were ample resources at your disposal to be able to understand any and all material.
- The list of exercises after each lecture.
- The most valuable part of this course was definitely the textbook and the practical things like homeworks and tutorials
- The notes from the discrete maths part of the course were very concise and easy to understand.
- The readings and quizzes
- The weekly quizzes and homeworks were really helpful because they gave us a reason to thoroughly look into each week's material and they didn't let us skip lectures and have to cram material just before coursework, as was the case with other courses. It was also really helpful that the weekly quizzes allowed us three tries for each question and that they weren't timed, because we didn't have to stress about the marks and we could actually figure out how to do each exercise.
- There are ranges of topics covered in DMP.
- There were clear chapters and content to work through
- This course involves both proof and probability. It is fun and more interesting rather than just one topic.
- Tutorials were really helpful, also the ability to choose the time for it myself helped me organise my timetable a lot. Discussion forum helped a lot! Thank you to the lecturers who were always ready to answer my questions! I enjoyed the structure of the course with weekly homeworks and test as it helped me stay on track with my studies a lot.

- Weekly quizzes and live Q&As so it was easier to know where we were in the course

- block2, because I didn't learn them before

- It's a good course, but I don't enjoy maths that much so can't say I enjoyed it. On another note, the organisation and help for lecturers has been very good

- The organisation of the course on Stack made engaging with studies easy and effective. I also really enjoyed tutorial activities
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1.8) What improvements, if any, would you make to the course?

- Don't post 5 hours of scribbles with mistakes as our "lectures". The first few weeks were good but once the lecturers changed it was a bit of a mess.
- I could not understand the notes for the probability part of the course. Maybe if they were typed/digital it would be easier, I think a lot of the problem was the lighting.
- I don't really know why we did the discrete maths section, the purpose was pretty unclear.
- I feel like mistakes in the probability section of the course were irritating and would be handy if they had been re-recorded without these mistakes but I preferred that style of lecture delivery.
- I think feedback could be a bit more detailed, and with remote learning there needs to be tutors that students can contact to get help as you'd get with somewhere like MathsBase. Studying completely alone is very difficult.
- I think the course is completely wasting students' tuition fee. I don't mean the content of discrete mathematics and probability are not important (instead very vital for CS students). But what our students expect from the course is to learn something beyond what we can learn by ourselves. All the content taught by instructors consists of a proper subset of the contents in the textbook and the cardinality of this set is much smaller. I can just directly read through the book to learn what I need and get much deeper than the course requires us to do.
- Secondly, the questions in the homeworks and webassign quizzes are really boring. What I mean 'boring' is that they lack of variety. I have even come through a sequence of questions which just required us to follow the same pattern, same formula but only different data to calculate a result with calculator. I don't see any meaning in such questions to let students learn the essence of math.
- Thirdly, the lecture video, especially the part about probability, is really low-quality. I think the course organizers and instructors know this by yourselves. How do students see the contents clearly with such bad light condition? Sometimes the whole screen is in the dark and I don't know how you can tolerate such 'lectures'. We students, ones completing the homework by handwriting, have tried our best to take clear photos of handwritten homeworks to make it easier for markers to see them. Can you please respect us in the same way?
- If I had the right to change another course instead of this one, I would select one without any hesitation and were willing to learn the content of discrete mathematics and probability by myself.
- I thought the second part of the course- probability was not well organised at all and the lecture videos hard to learn from. I've ended up not using them and just using the textbook and other online resources instead. The textbook reading didn't correspond with the actual chapters in the book too so this was a bit of a struggle to find the appropriate sections. I do understand our lecturers are under immense pressure just now so don't blame them in any way however the first part of the course was organised excellently and if the second part had been the same it would have been amazing.
- I would change the lecturers and course organizers. A clear lack of effort was displayed by both lecturers to make engaging content. The work expected from students was ridiculous and poorly announced, and thus the course organizers should be changed as well.
- In the probability part the better preparation of videos, so when professor makes a mistake, it would be better to make cut in the video instead of informing about the mistake later.
- It's already perfect
- Just redo the 2nd part videos.
- Lecture structure and tutorials.
- Lecturer should pay more attention to the part of Probability...
- Lectures not repeating textbook verbatim.
- Lectures of the second part of the course are completely unwatchable, writing is illegible, and they are too long (~5 hours), compared to the first part of the course that weren't longer than 1 hour.
- I like the quiz format, but some of the questions are too easy.
- Maybe the print type notes are more clearer to see the overall contents, others are all good.
- Please plan out the probability block of the course. Uploading 3h worth of content each week which essentially reads aloud the textbook is no different than students reading the textbooks themselves (it actually saves us a lot more time and money this way). DMP is an extremely content heavy course which requires extensive reading for both discrete math and probability sections. It might be easier to split the course into 2 10 credit courses running over the course of the semester rather than cramming each section into 5 weeks and piling on readings. At least, please replace the 20 min videos on each section with readings for each week with maybe 1 or 2 well-produced, well-planned video from each section highlighting the important parts of each chapter.
- Probability lectures were not done very well. Too long and too many of them
- Put all the homeworks/quizzes etc in one place so it's not hard to work out what you need to do each day and more live online interaction.
- Some of the lecture recordings were of lower quality, making it difficult to follow.
- The course does not have a right balance. The first part has relatively straightforward material and it doesn't cover much. However, the second part is over-loaded and requires much more time. It would be better to cut one week from Discrete Maths part and give more time for probability.
- The format, especially the second part of the course where there were sometimes 6h of lecture videos for a single week.

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The lecture slides and notes could be better if they were more conclusive.

The lectures of the first block were presented in an incredibly boring and non-explanatory manner. I loved learning the material, but I did it all from the textbook which was amazing.

The probability lectures were very long.

The video lecture for probability part is too long...although I understand that the lecturer was trying to explain everything clear which is nice, but the video is just too long and the handwriting was not very clear...And the first probability homework made me so confused cause the question did not provide enough information so I had trouble understanding the question.

The way that the second lecturer (Vesselin Velichkov) did the lectures was not very good, each week's lectures were about five hours long and extremely slow paced, so they were very hard to follow and eventually I had to rely on online resources to understand the material. The way that the first lecturer (Heather Yorston) approached the lectures was much better. Also the feedback we received on homework and coursework was not always very explanatory, and when I asked for further explanation on STACK the response I received from the instructor was not much better. People that grade our work should include in their comments what a correct alternative to our mistakes would be and not just tell us where the mistakes are.

There is no notes for the courses and the video is not clear. It is hard to learn and do revision without any notes. We can only refer to the textbook when we faced problems.

To be honest, this course is wasting my life, I can even study those contents taught in lectures myself. I don't mean the knowledge of this field is negligible or very easy, but the lecturers seem only to provide help for students who have no idea how to learn Math themselves. I totally respect every teacher and tutor of this course, but it's kind of wired that what I gain from lectures is nothing. I understand the difficulties of this hybrid teaching time, but I can't accept such low qualities of lecture pre-recordings, especially for the second part of the course. The lecturer always makes lots and lots of mistakes, though sometimes he can correct later in the videos, the frequency of correcting is too high to maintain a certain teaching quality that every student can accept.

While the first half of the teaching from Doctor Yorston was very good, the teaching from Doctor Velichkov was much more difficult to follow. While his actual teaching was good, his notes were barely legible, and given that my first language is English I imagined foreign students especially struggled with understanding his writing. Perhaps if Dr Velichkov's notes were typed, they would have been easier to follow.

I hope the lecture recordings could be a little bit brighter

I wouldn't spread out over so many platforms, VitalSource, Teams, WebAssign, Stack, Learn, complete mess to find things in first few weeks, use one centralised platform.

Lectures were a little confusing at times since the only way to get clarification on something was after in a forum which is usually hard to describe post lecture.

The Echo360 lecture recordings are useful as you can ask questions during the video recording at a timestamp.

Maybe space out the quiz and homework deadlines or make them available sooner as sometimes it felt like I studied the chapter, did the quiz and homework to the deadline, then it was onto the next section.

There is too many things to learn in block2 each week, and I was left behind.
2. Discrete Mathematics and Probability -

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

■ Complete all suggested exercise questions.
■ Concentrate on building understanding of all topics before taking the tests.
■ Do examples whilst you are learning a topic; they help tremendously.
■ Do reading and practice questions.
■ Do textbook questions.
■ Do the additional exercises.
■ Do your readings and practice if you have time :D
■ Don't neglect watching lectures every week and doing weekly homework, because that really helps you understand the material.
■ Even if you have done no probability before, it doesn't go super fast and is doable if you just do things when they are released and not cram.
■ Even though you are happy after the discrete part, you should expect much more work in the probability part.
■ I think it is suitable for computer science and AI student because it is not only pure math. It contains some probability and this make student to learn from every parts of math rather than just pure math.
■ It's recommend to related to the linear algebra learned in the first year.
■ Keep up with the material every week and don't be afraid to ask questions.
■ Make summary notes on steps to wrote a proof or solve a questions with a common layout.
■ Make sure to try out questions for each section as some topics may seem confusing at first but if you try them out they will often click.
■ Nice course, but the quality should be enhanced.
■ No need to watch all the videos. Text book covers much more about the content.
■ Please change to another course.
■ Read the textbook - it often explains things better and faster than the lectures do.
■ Read the textbook!
■ Reading textbooks and do exercises.
■ Read the textbook!
  Do the exercises!
■ Take care while solving problems.
■ To not take it if they have a choice.
■ Try to keep up to date with quizzes and homeworks.
■ Try to keep yourself organised every week, and for the second half of the course, watching the lectures are essential to gain any understanding of the lecture notes.
■ Watch the lectures on a high speed and do the quizzes and homeworks after. This means you won't have 7 hours of lectures a week, but only 3 and a half. This allows you do work on the other 3 courses you have this semester.
■ its easy
■ its tricky.
■ the book is useful but the hardest one is choosing between knowing the proof and spending a lot of time on the concept or distributing your time on getting a general feel of the course and making sure you know how things work more than anything else. your use of English in the answers is also important, i struggle with this
3.2) Please add any other comments you have about workshops, tutorials or labs on this course

- Didn't attend many tutorials.
- Due to the internet, majority of the tutorial time I can not hear clearly what my tutor was talking about.
- Due to the online nature, we could not write down our working out to show each other during workshops so it was difficult to learn or explain to others if anyone was confused. Although the material is useful I found the lectures on probability too long.
- I found them a bit useless. I can get more work done if I just work by myself instead of in groups.
- It was very interesting to discuss tricky question with my tutorial group. Helped a lot with some of the questions I had to do on my own.
- Keep up with workshops, but I do think that the workshop questions are much harder than the homework questions. I'm not sure if that is intentional, but I would like to see more challenging homework questions too.
- Online tutorials are extremely inefficient.
- Overall the tutorial is good. Maybe explanations of the question can be given to student when they are doing the questions.
- Really appreciated my tutor he was really nice and took time to explain things.
- Some questions were too difficult.
- Teams was sometimes quite slow and some students, especially ones connecting from abroad, couldn't speak or hear what was happening because of the connection so interaction was a bit limited.
- The tutorial every week is a good place to communicate to other students.
- The tutorials are the best part of the course, if you have an engaged group. This is where you have the most fun because you are learning from your peers.
- The tutorials mainly just covered the homework, there was not much more to them. The tutorials should have been focused on more advanced content from the course.
- Tutorials are good and helpful.
- Tutorials were fine. Not much enthusiasm from anyone. Sometimes they didn't happen or I couldn't get on them.
- Tutorials were ok, I find that little time goes to the actual working on questions.
- Working on a collaborative whiteboard with people at the workshop was good fun.
- Workshops were boring and didn't contain any new useful material. Peer-marking of homework was completely unnecessary part of it.
- Would have been good if more people turned up for the tutorials. Only 2 of us in last week's tutorial.
- didn't really go that often feel it would be rude to comment
- its time consuming.
- no
- the tutorial is very very insightful and it really really helps you understand the content, but its annoying its after the work is due from the week before as i feel i would have had better attempts at coursework provided i had the input from tutorials before
Please add any other comments you have about the presentation of course materials online and their accessibility.

- All good.

- As a student doing fully asynchronous learning, the videos are a HUGE part of my learning, and often the only contact I have with my lecturers. In a time where lecturers have gone above and beyond to make online learning more bearable (shoutout to John Longley and his music and revision songs) our probability videos have been rather disappointing to the point where I find myself skipping most videos in favour of just reading the textbook myself.

- Block 1 lectures were presented in a very non enthusiastic and boring way.

- Could have a timetable/schedule for the semester on learn.

- Everything was great

- First few probability lectures I struggled to read but wasn't persistent. Felt that the online quizzes multiple attempts were very generous as it was quite easy to get close to / full marks.

- I can not find notes from the probability part which is a shame

- It was confusing that all lecture material was on STACK and not on Learn, just like it was for the other courses, but then the homework was on Learn and the quizzes on Webassign. At the same time, the discussion forum for the course was on STACK also, and not on Piazza. The point is that the use of many different platforms and the very different organisation of materials from the one of other courses was unnecessary and took a lot of time to get used to.

- It was hard when the location of the weekly quiz was changed to a completely different website, and it would've been nice to use piazza instead of the forum. The online textbook was good.

- Materials are good

- Not very good for second part of course, sometimes the video quality was really poor. Not very engaging and that became a problem when there were several hours of lecture videos.

- The course material for the first part of this course is okay. For the second part of this course, the video is not clear and the notes is not given.

- The lecture videos for the second part of the course were too much consider we students also has other courses and their videos. It's therefore hard to watch every videos in the Probability section.

- The lectures for the probability part were of terrible quality. I was learning on my own from the textbook because the lecturer wrote in illegible way and he was actually going line by line along with the textbook. The probability part, though, was nice and presented in appropriate way for online learning.

- The organisation of the course on stack made engaging with studies easy and effective.

- The second half of this course is safely the worst learning material I have come across at Edinburgh. Multiple hours of lecture videos per week, each of these videos were just the lecturer going through the same examples, problems and concepts in the textbook, except instead of using the textbook he scribbled illegibly on a piece of paper in a dimly lit room and filmed it. That means that not only was the sheer amount of video time ridiculous, but there was no content in the videos that wasn't already in the textbook, if you could decipher the handwriting in the first place. As a result, most of the students taking this course taught themselves the content through the textbook and other resources, which can be verified by the ~40 views on the lecture videos on a course with over 100 students. Of course it's a hard time for everyone, organizing courses online is challenging, but the expectation the students were under to spend multiple hours watching videos, reading textbooks, completing homework AND quizzes, on top of regular coursework showed no regard for the challenges we face as students adapting to online school either! The clear lack of effort to create engaging online content that was useful and extended our learning beyond the textbook, while at the same time expecting students to spend hours and hours completing work with strict deadlines is frankly insulting

- Very bad, it's wasting my life, I can't believe those lectures are provided by our university.

- Vossler recrprding videos are hard to see, adding with his poor writing and super long videos. Hope they make it more clear and compact.

- Would prefer piazza over STACK because each week I have to change my email preferences for the new discussion forum.

- the offline writing of notse is sometiems hard to read but the best writing and lecture notes are in the lecture theatres with the overhead lit recorgding machines

- very good

- very spread out over many platforms so hard to find info occasionally
Reflecting on your experience of hybrid teaching and learning on this course, what has worked well for you?

- **Basically everything is fine, the only thing was the internet, but I assume that’s my problem.**

- **DMP was the only one of my courses that didn't even offer any in person tutorials / activities, so we didn't really get to experience hybrid teaching.**

- **Even though the workshops have been useful online, I still don’t feel they are as useful as in person workshops as it can be hard to grasp concepts without the same level of in person interaction.**

- **Everything worked well.**

- **For me it is ok as the tutorials and lectures still going well.**

- **Having the content on STACK was great. It was very easier to follow. With pre-recorded lectures, I could watch them at a time that suited me which worked quite well.**

- **I am happy that this course had it's collaboration on Teams and it worked well. Instructors also helped me actively when I requested group change.**

- **I enjoyed being able to choose the tutorial time as it helped me balance my timetable. Thank you again so much for organising the course so well during the pandemic! I really enjoyed it a lot. It was easy to follow and I didn't have any technical difficulties.**

- **I really enjoyed being able to go through the lectures at my own pace and watch them when I want.**

- **I think hybrid learning has left my motivation to learn very low. The readings work well as do the quizzes but I really can’t stand how this semester has been taught. Obviously that’s no ones fault and not much can be done but it has really hindered my university experience.**

- **I think that watching pre-recorded lecture content is useful as I can re-watch anything I don't understand the first time as many times as it takes to understand the concept. However online tutorials often lack participation from other members of the group and are difficult to learn from because we cannot write or point exactly what to explain or ask.**

- **Learning on my own pace is fun.**

- **Not much**

- **Not really a hybrid education for me since I'm not in Edinburgh. But I do appreciate having the freedom to arrange my own schedule and listen to DMP lectures whenever suits my timetable the best.**

- **Prerecorded lectures mean I can go through at own pace and schedule around other work.**

- **Quizzes and homework every week was a good motivation to learn online.**

- **Short videos and relevant textbook questions were good. Homework questions were not overwhelmingly difficult.**

- **The online lectures have been good to pause and take notes.**

- **The recorded lecture videos are good for us to organize our time.**

- **The timing**

- **The webassign quizzes and homeworks were helpful and the tutorials were a good place to ask questions.**

- **Video quality should be improved, and handwriting is not clear. (especially in Probability)**

- **Weekly online quizzes for maths helped me keep track of what I was meant to be learning.**

- **Yes, very well. I liked getting given all weekly tasks on a Monday and just working through them as we please.**

- **the organisation of the course - section breakdowns with videos and relevant chapters and exercises; peer review of homework in tutorials**

- **this course was not hybrid. It had no in person element to it. uni mislead everyone by calling it hybrid learning**

- **time flexibility**

- **tutorials most valuable, then the lecture recordings, book reading takes me too long and i struggle to keep up, online live is okay but mostly watch it after since sometimes i find it hard to know what to ask**
Is there anything else you'd like to tell us about your experience of hybrid teaching and learning on this course that would help us improve our approach?

- Because of the lack of exams, the amount of overlapping coursework has been completely overwhelming to the point that I had to apply for the uni counsellor. The lack of a proper timetable and only prerecorded lectures is very isolating and stressful and makes it hard to form a structure, keep track of deadlines and not fall behind.

- For this course specifically, most of the 'lectures' were just the lecturer writing out notes and reading aloud as they wrote. Sometimes the lighting meant you couldn't see and sometimes it would have been helpful to hear something that wasn't just being written down on the screen. The only point in watching the lectures for this course was if you couldn't read the writing of the lecturers.

- I do think that online live lectures would have made it easier to time manage, and would have kept me more up to date on course content.

- Lecture recording can be improved.

- Maybe have some study groups according to the degrees and timezone, to feel more engaged.

- Nothing.

- Online learning is difficult for everyone, but it does have the benefit of having second chances to improve/correct mistakes. These videos can be used to augment learning in the future so please spend a little more time on them, it's fine if they come out a few days late as long as the lecturers tell us that they'll be late.

- Online learning just sucks in general, it's hard to find motivation, I don't think you can improve much

- Online tutorials are awkward especially when people did not talk much. But I prefer that way.

- Part 2 of the course needs better videos and should have textbook questions for us to attempt noted down, not just in the video in case you don't have time to go through all of them.

- Still the collaborate platform is not the best and I recommend to move every interactive activities on Teams.

- The marking criteria for coursework were very strange. I was assessed based on something that wasn't in the question. When I emailed the course organizer, I was told that I shouldn't complain about it as I still got >70%. Marking should be fair and students shouldn't be surprised about the marking scheme. Even though the majority did well in the coursework. It might be better to design harder questions for the coursework than to artificially lower students' marks afterwards.

- The online tutorials weren't as beneficial as the in-person tutorials last year.

- We need tutors or someone we can get in touch with when there are difficulties in the learning process. Tutorials aside I've had to do this completely alone and without much help, and it's not like you can easily meet people to work with when you're not physically at the university.

- I understand in person teaching isn't possible for courses as large as computer science but own the fact.

- n/a

- no

- please improve the lecture recordings at least.
10. Thank you -

Thank you very much for taking the time to complete this questionnaire. Your response and comments will be fully considered.

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Please provide any additional comments you may have about the course, the teaching on the course or the resources that support it in the box below.

- Dr Heather's videos are very good, and she explains things well.
- Dr Vesselin Velichkov and Dr Heather Yorston thank you so much for organising such an interesting and engaging course especially during the pandemic!
- Why we still have online quiz on the week of final coursework .... I almost missed it until 2 hours before the deadline....So lucky! T T
- no
- thank you ;)
