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.
What did you find most valuable about the course?

- All the techniques I learnt.
- Assignment 1 and 3
- Courseworks were the most interesting part for me.
- Critical essay and evaluation of the study was very, very interesting. The papers that we could pick from all seemed to be very interesting - however the news articles were picked from reasonably low quality outlets which made it very easy to find flaws in them.
- Data science introduction, various concepts and related skills.
- David was extremely helpful and receptive to feedback. We were given a lot of flexibility in our coursework and the chance to be independent
- Enjoyed the non-maths part of the course. Lectures gave a good feeling for why an answer was a certain way.
- Enough knowledge to minimally understand and follow conversations around DS
- Gives a solid foundation to data science and statistical methods. It takes you through the whole data science process which is nice. The notes were very useful.
- I became interested in a side of informatics I had never really thought I would be, the lectures was easy to follow with interesting data in it to make it more interesting to watch.
- I found all of the different pieces of coursework all really interesting and enjoyable which I can't say about any of my other courses. Each piece was enjoyable to complete and I felt I had enough time to not only complete the coursework but also to complete it to a high standard. I just want to say thank you to the lecturers and course organisers because this course has actually really helped me get through this year!
- I found the courseworks and lectures most valuable.
- I learned how to use plot, pandas and seaborn.
- I liked all the actual statistics and such that we saw outside the first 4 weeks.
- I really enjoyed learning about visualisations in python and think this is a great skill to have learned.
- I think this course is one of the best courses in this Year.
- It's a good introduction to data science and it covers a lot of information. There was a lot of opportunities to test my knowledge. Lecture notes were very helpful and I used them frequently when working on courseworks.
- Labs were interesting but very long. Definitely took more than an hour especially in semester 1
- Layout of courseworks
- Learn some python packages: pandas., numpy and how to make a graph
- Nothing at all. I think it is more practical to learn the contents by myself
- Python labs and discussion of tools eg output of statsmodels
- Reading papers and using latex
- Real world datasets and interesting projects
- The course content
- The final project at the end really allowed you to have control in the investigative question. This autonomy feel as if you were doing something impactful.
- The labs and lectures.
- The labs were really interesting, although they were somewhat difficult.
- The lectures and accompanying notes were useful. Also the workshop and lab exercises were valuable. The structure of workshops being every other week was also nice. I also enjoyed working on the mini project over the Winter holidays as I felt it was good prep for the final project. Also the template and overall detailed guidance for the final project has been really helpful.
I also liked the fact that cw2 wasn't structured in an essay format, it made it a lot easier to complete. The sample class test was also useful in preparing for the 1st class test. The weekly live q and a sessions have also been very helpful.

- The material and the topics covered as well as the opportunity to work in groups on the final project.
- The personal project at the end is the most exciting part, but I think it wouldn't be possible without the preparation during the lectures and labs.
- The theory and implementation of data science
- The tools I've learnt to use
- The tutorial sheets are quite helpful and interesting.
- The wide range of topics discussed and skills we were able to learn. I found the emphasis in discussing ethical problems in Data Science very valuable as it is often overlooked or not given then importance it requires.
- This course has taught many useful knowledge and skills regarding to data analysis / visualisation and techniques about introductory machine learning. Also, it covers some preliminary concepts about statistics which is quite helpful.
- Thorough explanation of the material, interesting topics of coursework, labs
- Workshops and lectures as well as the online quizzes.
- Workshops were nice but quickly became impossible when teammates dropped out (maybe add a mark around them - even engagement£L)
- how to use the different statistical methods
- the labs were very interesting.
What improvements, if any, would you make to the course?

- As far as I understand that it is subjective, I do not see what is the point of setting the grading standards to an unreachable height. Let me do you a favour by reminding you that this course is called ‘Foundation of Data Science’ instead of ‘Advanced Data Science’. Most of the students taking this course are new to data science, so please do not expect us to produce our work at your standards. When we appeal against the results, you give comments like ‘I know you are not satisfied with your marks, but we are strict for your good’. I strongly urge the professors to reconsider your sky-high standards you made for this course. Instead of making people like this course, you are ruining the first-time experience of people towards data science.

- As for the majority of the courses, there were often delays regarding the release of material.

- Assignment 2 should've been communicated better. Seemed out of place and didn't really enhance the course in any way.

- Better handwriting for the maths

- Clearer instructions for courseworks

- Even if I think that we were introduced to many ethical questions even more of them would still be interesting.

- Group lab sessions were difficult to coordinate and sometimes took too long to prepare.

- Group workshops shouldn't happen if it is online next year.

- Have quizzes out with lectures.

- Higher level approach to maths

- I feel this course could have offered much more than it does right now, in terms of content/coursework, and developing skills needed by data science.

- I found the feedback to the courseworks submitted so far to be a little short (especially CW2), but apart from that I cannot think of any major improvements.

- I found the videos a bit disorganised and not well structured. Also there could be some better and more intuitive explanation of mathematical concepts. These may have been an issue due to the nature of the teaching this year, where lecturers didn't have access to a blackboard.

- I think writing an essay is not helpful to me. I did not learn anything from it.

- I would probably have weekly workshops and perhaps attach some credit to engagement (~5-10%) for them. I found it quite easy to drift from the course when there weren't any courseworks on as the rest of my courses constantly had for-credit work to keep me engaged.

- I'd prefer if the course didn't have a description that makes it sound primarily like an essay subject or start with 4 weeks that do nothing but suck out all my desire to learn the course then expect me to still learn about it in my own time.

- In terms of the course structure, I hope it can be more organised. For example, for the first few weeks of the second semester, there was a huge amount of workloads. Then in the next few weeks, the amount of workloads decreases dramatically. This is not very organised. Then, I hope the criteria of any assessments can be released before the marks are given, then people know what the assessment is assessed on.

- It would be nice if the structure of lectures would be clearer and the workload more balanced. During the first semester the workload was sometimes very overwhelming, that was already much better in 2nd semester.

- Items for credit were very spread out, which encouraged ignoring the workload until a piece of coursework or a quiz came out. Perhaps if tutorial submissions were for credit, or there was an extra small project in semester 1 this would have encouraged keeping on top of things.

- Kobi's lecture videos were of a academic poor quality - it was very difficult to know what was relevant for the course. The slides seemed to have been put together very quickly with little information present. There were not any useful resources like notes for that part of the course. David's lecture video were really good but at times could be a little bit trying and dull.

- Labs were very long

- Let the course continue in next year if you would like to make UoE's QS ranking lower. I don't want to give any advice because ‘You can't wake a person who is pretending to be asleep’.

- Make this course a 1 semester course and make it easier.

- Maybe having some of the really technical material that we covered in the second half of the first semester put in the first half instead, and the first half of the semester material - that I felt took less time to cover - put in the second half. I felt that I had a lot of time in the first half of the semester and could have actually taken my time to really understand these concepts, unlike in the second half where I felt I was falling behind I was trying to understand one topic without having fully understood the previous one

- Maybe more structured labs and tutorials so people feel like there's a point in going to them?

- More objective assessment - assessment and judgment criteria weren't always clear for me, also not all people received written
feedback in essay writing coursework which doesn't seem fair. Also, 2nd semester topics could be more spread out throughout the semester instead of being concentrated in the first weeks of the 2nd semester.

- More practice applying the statistical techniques to populations. Perhaps especially for the first coursework there could have been more transparency with how we were going to be marked due to some people losing marks for things we had never been told to consider such as colouring for colour blind people. The marking for that coursework also could have been more consistent.

- None

- Overall, it is satisfactory.

- Please make clear of what you expect from the students! In the lab questions, we were often asked to do one thing, but the answers would include a lot more things that we were not even told about. The feedback for the coursework is very unspecific and again a lot of the times the question formulations for coursework were very vague and confusing. Absolutely unnecessary use of LaTeX for the project. Had to spend a lot of time on just getting to know how to use it instead of a normal editor, while having 5 other course works for other courses on hand. Just why would you do this to us.

- Some of the lectures were definitely too long. I wish there was more about ethics

- The pure maths parts was hard for me to understand. Not incredibly difficult, but felt harder to understand than the rest of the course.

- The structure of workshops requiring group work in advance I think was good in theory but somewhat difficult to facilitate given the current circumstances. Therefore, I wish there was less stress on the groupwork aspect of things and just on completing the tasks, or maybe we could have had time in the tutorial to work on some of the tasks in groups.

  I feel that Class test 2 should have been scheduled for before the Easter break or during the revision week so that we could be finished with the course as a whole before the exam period.

  I feel we could have had some more detailed guidance for cw1 as some of the feedback in marking was critiquing aspects of our work that were implied to be necessary but hadn’t been stressed in our initial instructions.

- When doing the cw, the explanations on piazza are usually vague, hard for me to understand what to do next. The math used to prove the theories sometime hard to understand.

- exchange to math course will be better

- the courseworks could have a better marking scheme
2.1) What advice would you give to a student taking this course in future?

- "It's not as bad as the first month makes it seem"
- DS is one of the biggest fields in CS to come, applicable across almost every discipline. While you might not need to know how all the formulae are derived it helps if you eventually decide to pursue a career involving larger amounts of DS
- Do quizzes at the end of each week and go over all of them before class tests.
- Do take the time to attempt solving the labs, if possible, in a group with others. If interested, hackathons can help with getting more experience with the course material. Otherwise, just enjoy.
- Do the lab work has it will help when it comes to coursework.
- Do the labs and type them yourselves. I often referred to the solutions, because I didn't really know how to handle things, but I always typed things myself and thus I still learning a lot! That really shows in the final project.
- Do the labs! And further research is always useful
- Do the labs, they really help in understanding the methods.
- Don't get too hung up on understanding the formal mathematical motivation behind each topic, as long as you understand the methods you are taught and when to apply them at a somewhat detailed level, you'll be fine.
- Don't take it if you can
- Don't worry about trying to understand all the derivations
- Emmm, not recommend.
- Engage with all the course's materials - I didn't complete all labs and hence I feel a little gap in my knowledge.
- Enjoy it
- I hope the student can be mathematically prepared for this course, because personally I found it uncomfortable to know how something works but not now how the detailed math underlying works. They are indeed introduced in the course materials, but I found that I didn't learn it very well. I personally recommend to if have some math problems or exercises together with the coding practices, which will further consolidate the knowledge. The weekly workshops are kind of not enough.
- I would advise them to do the labs in the allotted time slots and make use of the lab demonstrator's help. I would also advise them to use their creativity as much as possible when doing CW1 and CW3, as the data tells many more stories than would appear at the beginning.
- It's okay
- It's worth trying since it is highly related to the world-hot questions.
- Just passing this course is already good enough.
- Keep up to date with the materials and do the extra work as it pays off.
- Learn some numpy in your own time
- Make sure you download copies of the notes - if they are provided - for each weeks topic as they are super super helpful and a great resource.
- Maybe have a look at python if you have never used it before, also revise maths from year 1
- Read courseworks and course material carefully before doing tests and courseworks
- Schedule a time to complete the labs (notebooks)
- Semester 2 first couple weeks have a very high workload
- Take some exercises in Python in advance
- Take the time to understand the maths
- The marking standard of this course is higher than what you expect. I shall remind you that even the professors can only get an 80 for their own marking scheme as what was self-proclaimed by themselves. Please be prepared that your marks will be deducted due to many unexpected reasons.
- be creative
- you'll get through it
3. Informatics 2 - Foundations of Data Science

Please add any other comments you have about workshops, tutorials or labs on this course

- Demonstrators were good at explaining the lab sheets. My workshop tutor - Chris Williams - was very good and provided some really useful feedback.

The number of presentations at the start of the course made for a disproportionate amount of work - question sheets provided towards the end of the course were much more useful and allowed us to get feedback from tutors over some of the more computation elements of the course.

- Due to the heavy workload of other courses, I was disincentivised to go to tutorials every week. Also, my tutor wasn't very engaged and cancelled the tutorials due to low turnout the weeks we had coursework in other subjects and I couldn't go the weeks I was available.

- I did not do any of the above.

- I didn't like the fact that they kind of forced us to work in teams for the workshops, especially during the pandemic. I believe that I could have gotten much more out of the workshops if they were to be done individually.

- I really appreciated when lecturers put extra effort and included topics that were relevant for us (Portobello and Minecraft topics, Workshop 5) in tutorials.

- I really enjoyed workshops as they got us to interact with other people on the course that we didn't know. Labs were super helpful when doing the notable work as the demonstrators were really helpful and friendly and gave thorough explanations of material I had not understood fully.

- Labs are usually fairly empty, unfortunately.

- Labs take longer than an hour to complete. It's hard to get everything done during the lab session, especially if you ask questions.

- Labs were not the best online and very long to do.

- More workshops! (Also, scrap groups for workshops. It makes them less appealing to work toward and attend).

- No

- None,

- Some labs were decent, workshops seemed pointless to me. I also didn't like the group aspect in workshops, not that I don't like working with other people, but skills varied significantly to the point that doing a workshop alone was easier.

- The labs improved a lot during the course. At the beginning they were very long and tedious to do, but they became more interesting. Especially the webscraping lab was fun!

- The tutor of my tutorial slot is kind but the content of tutorial materials are bad.

- The tutorial presentation will cost me a lot of time, but most of the feedback I get is about the presentation itself and my slide. I feel that it is not very helpful to my data analysis ability

- They are great

- They were interesting and helpful

- Too many presentations

- Tutorials were interesting in semester 1. Labs were alright too

- Workshops became better once when didn't have to prepare presentations that took ages in advance

- The labs were well laid out.

- labs are like working alone, but online. I can ask for help during labs if I needed to, but that's not very time efficient, due to being online I guess.

- labs are useful, tutorials are interesting but sometimes used a lot of time

- workshops and labs were interesting
4. Informatics 2 - Foundations of Data Science -

4.1) Please add any other comments you have about the presentation of course materials online and their accessibility.

- Always something inaccurate
- Course's materials were well-presented and easily accessible.
- Everything was good
- Fine
- Good quality notes. Not so good lectures.
- I think course had the best organization out of all inf2 courses.
- I understand the mathematics behind the course is important but perhaps spend less time on it or make explanations of it a bit student-friendlier, I found I struggled with them quite a bit.
- It was well presented
- Lectures were sometimes released late and this can disrupt a student's plan for the week.
- Most of the lectures were well on time, but the comprehension questions were delayed for a long time during the 2nd semester. That was not good, especially as they became an essential part for me to finish watching the lectures.
- Nice to be able to watch whenever I want, and rewatch as many times as I need
- No
- No comment
- Online labs were very meh
- Organisation of everything into folders for each week was very good. In general the learn pages were very well organised.
- Project information could have been under assessment rather than under week 7
- The accessibility was very good and easy to know where things were

- The course materials were really easy to find. The only thing I would suggest is that for the final project there be a slightly better explanation for where each part of the instructions were found - e.g. the notebook instructions in a notebook on git. I also think the lecture notes should have been talked about more, personally I used them a lot and found them super helpful but I feel like some people may have missed them.

- The handwriting slide is very good which allows me to easily keep up. But for some graphs, it may not be intuitive enough and it is troublesome to draw by hand. I think the calculation steps can be handwritten, but some graphs and very long text definitions should not be handwritten.

- The proof section could improve.

- The thing I hated the most about this year as a whole was that I wasn't able to learn at my preferred pace (blazingly fast) which made it a real struggle to stay interested long enough to engage with the content. Last year this wasn't an issue since I had physical attendence and live lectures to help keep me engaged. I'd like for the entire year's resources to be made available from the start like the maths courses I'm taking are doing.

- Very organised and clear. The attached notes for each lecture, on top of the lecture slides, were fantastic and extremely useful when reviewing the course materials for tests or assignments.

- Would like to have one big document of the course notes

- all materials were presented in a very easy to navigate way

- easy to understand

- it was put-together well
Reflecting on your experience of hybrid teaching and learning on this course, what has worked well for you?

- Applying the knowledge taught.
- Going over the notes, and testing my knowledge in the comprehension quizzes right after.
- High level of flexibility.
- I can learn whenever I want instead of a specific time which is good.
- I could watch the lectures at any time.
- I didn't experience hybrid teaching at all this year. All of my learning happened online.
- I found everything to be working well.
- I think the course was very good and the hybrid and online approach was very well done, particularly lectures which were very well organized.
- It was alright. I didn't have any difficulties.
- It wasn't hybrid. It was 100% online. Online lectures were OK, but, online tutorials were not that engaging and also I couldn't motivate myself to go to the labs. Also, sometimes it was hard to motivate yourself to study overall when 100% of the course was online and there was not much human interaction.

Lecture recording s and Tutorials online really helped.

- Nice to be able to watch whenever I want, and rewatch as many times as I need.
- No hybrid learning.
- Nothing.
- OK.

Teaching was good, I liked that the videos were always ready on time. They spoke clearly so it was easy to understand and they explained concepts well so it was easy to follow.

The ability to watch lectures at my own pace and scheduling learning without many constraints. The Q&A sessions were also very helpful (especially the fact that they were recorded since I often could not attend the live session).

The hybrid teaching on this course was really good. I still felt really involved through the good communication, announcements and Piazza. It was also great to meet some new people through getting assigned workshop groups and I loved that there was a mix of personal assignments and group ones.

The labs have been a great help. I found working through the notebooks great, if a bit long at times.

The lecture videos were good length and had the right amount of detail. The labs were really useful and interesting. The instructors were clearly engaged int he live q and a and acted on feedback received.

The lectures and Q&A sessions worked very well.

The lectures were well broken up so it made them easier to watch and take notes on.

Tutorials are not very good/time efficient, due to being online I think.

Working in pairs for the lab sheets was really nice. Collaboration groups was an excellent idea - even though at times is was logistically complex - I think they really helped to make the course more enjoyable rather than working on these things on one's own.

Working through the labs, making notes, and doing the comprehension questions.

not being time-bound
7.2) 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?

- A bit nit-picky, but there are parts in certain lectures that can be edited out without loss of overall quality. (well, other than the lecture/lecturer perhaps seeming a bit ‘choppy’ in the video at times, but that seems like a smaller nuisance)
- As said earlier, I’d like it if the resources were available from the start.
- N/A
- No (2 Counts)
- No hybrid learning
- No. (2 Counts)
- Nothing

Perhaps a little more training for lecturers in editing lecture videos would have been useful

Perhaps allow students to pick workshop groups as that might incline them to attend/do the prep work especially if it involves working with others

- Sometimes, it may have been helpful to provide estimates of when the lectures would become available, as this would aid planning, but I do not think this to be a major issue at all.
- The quizzes didn’t work that well as they got delayed a lot and thus, there was apart from the Q&A session not much interaction. Maybe it could be considered using TopHat during the Q&A session (live lecture) to improve the interactiveness there.

This applies not only to this course but overall: Do not just promise hybrid teaching, but actually provide it. If you cannot provide hybrid teaching, then notify us as soon as possible.

- nope
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.

- Cancel the course ASAP

- David and Kobi need to communicate more as at times they were seeming presenting very disjointed fronts. I.e. in the critical essay cw David said in a live q&a that penalties would be applied for overly long answers whereas near the same time Kobi was saying that long responses would not be penalised.

- Coursework 2, learning material at the same time as writing essay on it was not fun. No tutorials or labs on any of this material. Fundamental lack of understanding re the material

- Dr. Kobi Gal has been very helpful and encouraging with any questions even if they were related to topics outside the scope of the course.

- I think the course was fantastic, every part of the course was very well prepared.

- I think what's here is very impressive for a new course

- N/A

- No

- Overall since it was the first year of teaching this course I understand why there were difficulties and problems, but some things about coursework were really frustrating.

- Sorry for being harsh on the comments, but just like what you taught us, I know you are not satisfied with the comments, but I am doing this for your good.

- The marking scheme for the critical essay is awful. If the organizer cannot give a good solutions to give a 'fair' mark, then the critical essay should be cancelled or lower the percentage it contributes to the final marks.

- The organisation for this course, in general, could have been better, for example with the first-class test, we could have been informed earlier about the format of the assessment in order to allow for more time in preparation. Also, the delayed-release or lack thereof of comprehension questions for some topics hasn't been ideal as they are supposed to be really good preparation for our class tests that we don't have access to at the moment.

- The support on piazza was good