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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<table>
<thead>
<tr>
<th>Rubric given to all students taking the end-of-course feedback survey</th>
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<td>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.</td>
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<td>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:</td>
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<td>• Equality, Diversity and Unconscious Bias (<a href="http://edin.ac/2iyPZBv">http://edin.ac/2iyPZBv</a>)</td>
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<td>You also have a responsibility to provide feedback in a manner which does not breach the University’s Dignity and Respect Policy:</td>
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<tr>
<td>• University of Edinburgh Dignity and Respect Policy (<a href="http://edin.ac/1Cq0VZy">http://edin.ac/1Cq0VZy</a>)</td>
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<td>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.</td>
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What advice would you give to a student taking this course in future?

- Be sure to supplement the lectures with reading from the course textbook.
- Buy the book
- Do not take this course. If you really want to, I found online videos that were much better than the actual lectures of the course.
- Even if the course was badly organized, I would recommend machine learning students to take the class as reinforcement learning is a very interesting topic and good to know if you are in the machine learning path.
- If Pavlos is teaching, don't take it :)
- Prepare for self-learning, for most of the time.
- Preview before lectures
- Read on your own and go through David Silver's course.
- Read the Sutton and Barto book before and during the course. Make sure you're interested in the course topics beforehand.
- Reinforcement Learning is a core idea in many of the Artificial Intelligence fields. Taking this course will be complimentary to understanding many other courses and subjects.
- Reinforcement learning courses online would most likely be much more coherent, useful and easier to learn from.
- See who the lecturer is.
- Take it to force you to learn by yourself if you're interested in RL, but don't expect a good teaching if it doesn't change. As it is, it requires little work and should be easy to pass, though.
- The Sutton & Barto book is well written and helpful
- There will be self-learning involved to understand the content.
- Watch David Silver's lectures on YouTube and decide if they course is for you
- consider taking another course instead
What did you find most valuable about the course?

- Close orientation on the textbook by Sutton & Barto.
- Tutorials with the TA
- Communication with lecturer and other students on Piazza
- Another university had a better course. It was more... helpful.
- Assignments were useful in practically applying RL concepts.
- Basics
- I very much enjoyed the subject and found the course content very interesting.
- Not much, I had to learn most of the content from other sources.
- Piazza discussions, the assignments helped understand the contents of the course. Recorded lectures.
- The basic knowledge of machine learning
- The book is very good.
  The online discussion on Piazza is more or less informative.
- The contents, but it wasn't well prepared, it is a shame.
- The coursework was interesting. I could see that the lecturer was making an attempt to help the students to learn the content.
- The fact that it forced me to study RL independently on YouTube using David Silver's UCL course.
- The first coursework and the assigned reading.
- The subject itself.
- The topic is very interesting
- Very interesting topic. The assignments were good to get our hands dirty. The list with things we should know for the exam is very helpful.
- coursework
  Exam was set at the correct level.
What improvements, if any, would you make to the course?

- Allow to do coursework with Python as well, make requirements more clear. Revise lecture slides so that they can be better understood without accompanying audio. Lecture quality is also subpar.
- Better communication and organisation. Make learning outcomes more clear.
- Have a specialist in Reinforcement Learning teaching. The topic is too important and challenging to be handled by someone inexperienced.
- Just use the UCL slides from David Silver, and teach along to those. The course felt very unstructured and chaotic.
- Lectures can be more scripted
- Make it 20 credits and get a competent instructor.
- More effort could be spent preparing for lectures and trying to convey the content to the students in an organised and educational fashion. For a good example, see online lectures of the same subject from UCL. I agree with other students that using Python for the coursework should be an option because of its prevalence in this area.
- Please allow use of Python. Matlab is barely used outside of academia, and becoming less used in academia too. Other ML courses at Edinburgh allow use of Matlab. The course required spending an unfortunate amount of time getting to grips with Matlab behaviour, rather than studying RL.
- Provide feedback for first assignment before second assignment is due. More explanations/information on slides.
- Quality of the lectures.
- Quality in the lecture preparation.
- Dynamic of the lecture
- Few tutorials
  - Significant changes had been made to the course since last year, and I appreciate that this inevitably leads to a degree of uncertainty in the course content. However, in general I felt that the objectives of the course could have been outlined from the beginning in a bit more detail - this is particularly pertinent to the second half of the course, where the content hadn't been fully agreed upon at the start of the course.
  - The contents of the course were not clear at the beginning and the professor changed them pretty much every week. Slides were terrible (different notation every week, not informative, unclear, etc), lectures were not as useful as they could have been, assignments were worth a really low percentage of the final grade (even if this course should be mostly practical). Do not make us use matlab in the future.
  - The course has been definitely organised in haste. Sometimes we could not even get the slides before a class before/on the lectures’ days, which made it a lot hard to follow lectures since no preview could have been done. Pavlos is a very good instructor on Piazza while may not be so when in the lecture because sometimes he just does not seem to have fully prepared to give a lecture.
  - The coursework 2 of this semester may need more descriptions on the coursework sheet to make students clearer about the goals.
  - The course was very badly organized
  - The course was very disorganised, the lecturer was very inexperienced and (many) students ended up learning the material by reading the book, since the lecture slides were very messy and uninformative.
  - The lecture materials (and by extension the lectures) were outdated and hard to follow; most times it was a wall of equations with little context. Adding regular tutorials is definitely a good ideas as well; we had in-class tutorials with 100+ people in them, which in the end were just lectures.
  - The slides are not well organised and clear. You should take inspiration from David Silver's slide.
  - The textbook writing is not clear, not very attractive. The language used in the book is not natural, not a good guidance for a fresher.
  - This course could have brought so much more if it had been organised better. The slides were often uploaded very late, one time even after the lecture had happened, and the lecturer did not usually seem very prepared. This is a shame, because he did make the impression that he knew what was going on, but without preparation you just can't explain a subject like this very well. Practically speaking, I would improve four things:
What improvements, if any, would you make to the course? (continued)

- (1) Make the course more organised: regular tutorials and a schedule that is fixed beforehand.
- (2) Improve the lectures, for example by including more examples. We covered many different ways to do the same thing, such as DP, MC, TD, so it would be super useful to have one example that works with all of these techniques and just do one or two iterations by hand on the blackboard for each of them after you've covered them. Then we can see what it's doing, rather than having to try and figure it out through the equations and eventually the assignment.
- (3) Switch to the newest edition of the book. I looked up certain things there and some parts are so much more detailed and clear.
- (4) Have more regular labs instead of the assignments being the only applied part. Something like IAMl would be really good. In that case you could also put more weight on the assignments.

- Turn it to a 20 credits course and make it much more complete and fun. Switch to Python.
  The content of the course has been reduced since last year because some students complained it was too much. It has been reduced far too much. It got better, but the first few weeks were incredibly slow.
  The first assignment was too easy (almost no thinking and mostly fighting with Matlab), and the second one was on the same problem, and could have been part of the first one. The use of Matlab was mandatory. Matlab is hated by most CS students and is not a desirable skill to learn when one already knows a real programming language.
  We didn't have tutorials but instead had in-class tutorials and sessions to explain the assignments. This is not normal, just a proof that there is not enough content to even fill in all the allocated lecture slots.
  Overall it's not enough for what we pay.

- Coursework should, in my opinion, be worth more marks.

- It needs better slides, better preparation in general.

- more materials about backgrounds for other students who are not familiar with it
Please add any other comments you have about workshops and tutors

- No student comments