

students evaluation of teaching

Machine Learning for Earth and Environmental Sciences (Spring 2022)

T. Beucler, M. Gomez

Spring 22

13 respondents



UNIL | Université de Lausanne

Centre de soutien
à l'enseignement

Attestation

We hereby testify:

T. Beucler, M. Gomez

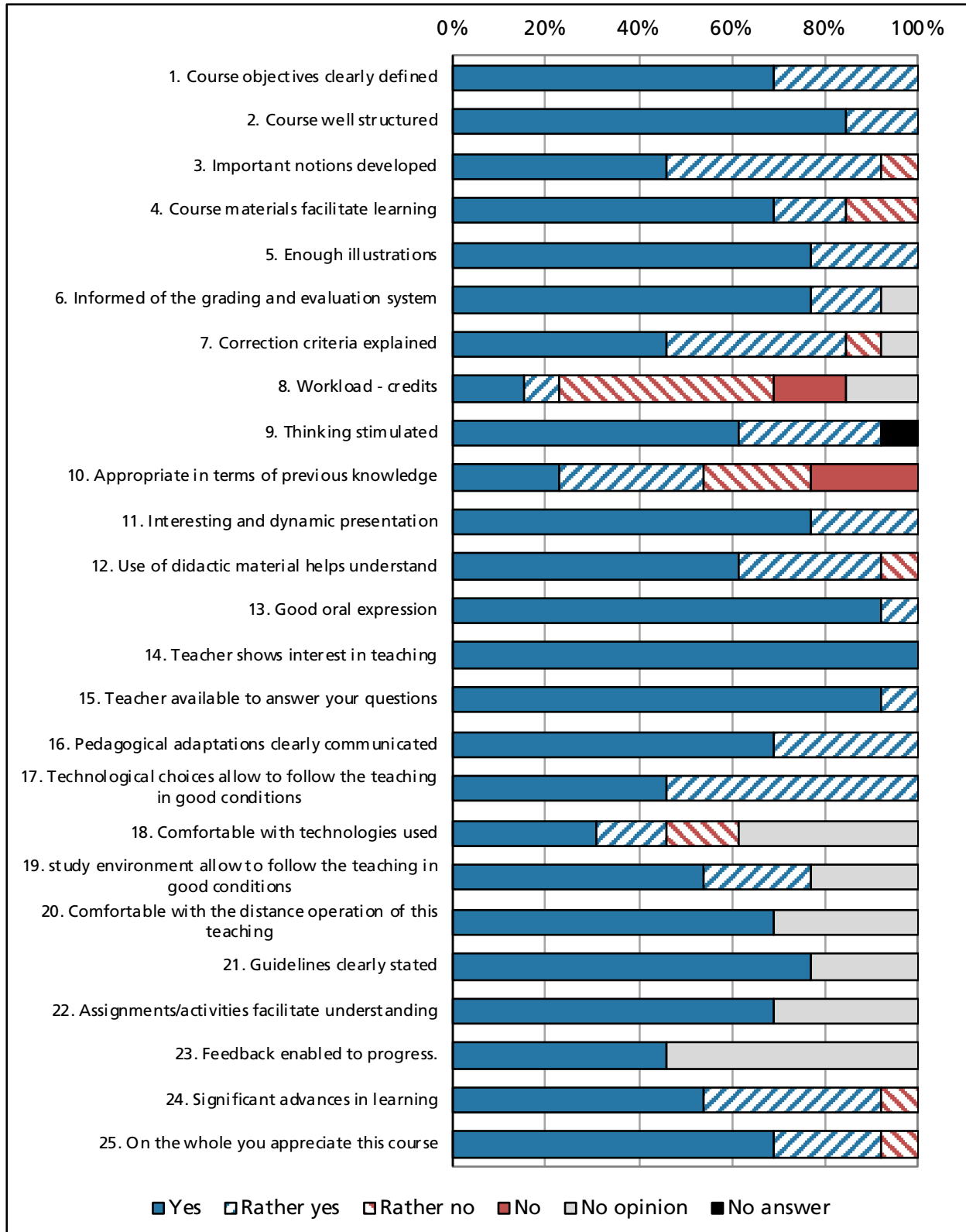
have had their teaching evaluated by the students according to the procedure currently in force at the University of Lausanne.

The following teaching has been evaluated:

| Title: | Semester: | Number of respondent-s: |
|---|------------------|--------------------------------|
| Machine Learning for Earth and Environmental Sciences (Spring 2022) | Spring 22 | 13 |

Lausanne, 19.04.22

graphic



frequencies and percentages

In which Faculty are you registered:

| | |
|--------------|-----------|
| FTSR | 0 |
| FDCA | 0 |
| LETTRES | 0 |
| SSP | 0 |
| HEC | 0 |
| FGSE | 12 |
| FBM | 0 |
| EPFL | 0 |
| Other | 1 |
| No answer | 0 |
| TOTAL | 13 |

In what year of your program:

| | |
|--------------|-----------|
| BA1 | 0 |
| BA2 | 0 |
| BA3 | 0 |
| MA1 | 8 |
| MA2 | 1 |
| Other | 4 |
| No answer | 0 |
| TOTAL | 13 |

For you, this course is:

| | |
|--------------|-----------|
| Optional | 8 |
| Compulsory | 5 |
| No answer | 0 |
| TOTAL | 13 |

| | No | Rather no | Rather yes | Yes | No opinion | No answer | TOTAL |
|---|----------|-----------|------------|------------|------------|-----------|------------|
| 1 Course objectives are clearly defined. | 0 0% | 0 0% | 4 31% | 9 69% | 0 0% | 0 0% | 13 100% |
| 2 The course is well structured. | 0 0% | 0 0% | 2 15% | 11 85% | 0 0% | 0 0% | 13 100% |
| 3 Important notions are sufficiently developed. | 0 0% | 1 8% | 6 46% | 6 46% | 0 0% | 0 0% | 13 100% |
| 4 Course materials facilitate learning. | 0 0% | 2 15% | 2 15% | 9 69% | 0 0% | 0 0% | 13 100% |
| 5 The course was supported with enough illustrations. | 0 0% | 0 0% | 3 23% | 10 77% | 0 0% | 0 0% | 13 100% |
| 6 You were informed of the grading and evaluation system before the exam. | 0 0% | 0 0% | 2 15% | 10 77% | 1 8% | 0 0% | 13 100% |
| 7 The correction criteria have been explained. | 0 0% | 1 8% | 5 38% | 6 46% | 1 8% | 0 0% | 13 100% |
| 8 Workload is appropriate in relation to the number of credits given to the course. | 2 15% | 6 46% | 1 8% | 2 15% | 2 15% | 0 0% | 13 100% |
| 9 Your thinking is stimulated. | 0 0% | 0 0% | 4 31% | 8 62% | 0 0% | 1 8% | 13 100% |
| 10 The course is well appropriate in terms of your previous knowledge. | 3 23% | 3 23% | 4 31% | 3 23% | 0 0% | 0 0% | 13 100% |
| 11 The course is presented in an interesting and dynamic way. | 0 0% | 0 0% | 3 23% | 10 77% | 0 0% | 0 0% | 13 100% |
| 12 The use of didactic material helps you understand the concepts that were taught. | 0 0% | 1 8% | 4 31% | 8 62% | 0 0% | 0 0% | 13 100% |
| 13 The teacher's/teachers' oral expression is good. | 0 0% | 0 0% | 1 8% | 12 92% | 0 0% | 0 0% | 13 100% |
| 14 The teacher shows/teachers show interest in teaching. | 0 0% | 0 0% | 0 0% | 13 100% | 0 0% | 0 0% | 13 100% |
| 15 The teacher is readily available to answer your questions. | 0 0% | 0 0% | 1 8% | 12 92% | 0 0% | 0 0% | 13 100% |

students evaluation of teaching

Machine Learning for Earth and Environmental Sciences (Spring 2022)

T. Beucler, M. Gomez

Spring 22

13 respondents



UNIL | Université de Lausanne

Centre de soutien
à l'enseignement

| | No | Rather no | Rather yes | Yes | No opinion | No answer | TOTAL |
|---|----|-----------|------------|-----|------------|-----------|-------|
| 16 The pedagogical adaptations made to the teaching have been clearly communicated. | 0 | 0 | 4 | 9 | 0 | 0 | 13 |
| | 0% | 0% | 31% | 69% | 0% | 0% | 100% |
| 17 The technological choices deployed in this teaching allow you to follow the teaching in good conditions. | 0 | 0 | 7 | 6 | 0 | 0 | 13 |
| | 0% | 0% | 54% | 46% | 0% | 0% | 100% |
| 18 You are comfortable with the technologies used and/or offered in this teaching. | 0 | 2 | 2 | 4 | 5 | 0 | 13 |
| | 0% | 15% | 15% | 31% | 38% | 0% | 100% |
| 19 Your study environment allow you to follow the teaching in good conditions. | 0 | 0 | 3 | 7 | 3 | 0 | 13 |
| | 0% | 0% | 23% | 54% | 23% | 0% | 100% |
| 20 Overall you are comfortable with the distance operation of this teaching. | 0 | 0 | 0 | 9 | 4 | 0 | 13 |
| | 0% | 0% | 0% | 69% | 31% | 0% | 100% |
| 21 Guidelines for completing the assignments/additional activities are clearly stated. | 0 | 0 | 0 | 10 | 3 | 0 | 13 |
| | 0% | 0% | 0% | 77% | 23% | 0% | 100% |
| 22 Assignments / additional activities facilitate understanding of the concepts taught during the course. | 0 | 0 | 0 | 9 | 4 | 0 | 13 |
| | 0% | 0% | 0% | 69% | 31% | 0% | 100% |
| 23 Feedback on your work enabled you to progress. | 0 | 0 | 0 | 6 | 7 | 0 | 13 |
| | 0% | 0% | 0% | 46% | 54% | 0% | 100% |
| 24 You have made significant advances in learning in this course. | 0 | 1 | 5 | 7 | 0 | 0 | 13 |
| | 0% | 8% | 38% | 54% | 0% | 0% | 100% |
| 25 On the whole you appreciate this course. | 0 | 1 | 3 | 9 | 0 | 0 | 13 |
| | 0% | 8% | 23% | 69% | 0% | 0% | 100% |

students evaluation of teaching

Machine Learning for Earth and Environmental Sciences (Spring 2022)

T. Beucler, M. Gomez

Spring 22

13 respondents



UNIL | Université de Lausanne

Centre de soutien
à l'enseignement

comments

| aspects of this distance teaching to maintain | aspects of this distance teaching to avoid |
|---|---|
| Receiving real-time instruction and feedback from the TA and instructor is very nice and should be maintained | Avoid using pre-recorded material / seminars over zoom. The technology can be a bit challenging at times. |
| no opinion | no opinion |

students evaluation of teaching

Machine Learning for Earth and Environmental Sciences (Spring 2022)

T. Beucler, M. Gomez

Spring 22

13 respondents



UNIL | Université de Lausanne

Centre de soutien
à l'enseignement

comments

| strengths | aspects to be improved | comments, clarifications, suggestions |
|--|--|--|
| The strength of this course is that it dives into interesting topics and teaches students practical programming skills. The lab notebooks are of good quality. Lecturer is energetic and very helpful | Focusing the first few weeks of lab sections on simple programming tasks may help students to ease into the technical details more easily. It would also be great if the lecturer can do live programming demonstration in the first 30 minutes/45 minutes of the lab. | |
| The availability of the teacher and his passion for the subject | The workload... It's just barely manageable for me (knowing that I am a master student taking the course for credits). And I have no idea how I will be able to work on a personal project in addition of the the current workload of the course itself plus the rest of the cursus... In general it's way to much Maybe learning less algorithm and having more time on specific subjects would be better, as it's impossible to keep up and remember/learn all we are going through at the moment (knowing that most of use never heard of ML five weeks ago) | |
| The topic is brand new and super interesting. The format of the exercises is very good. It's a way of learning that allows you to really improve and understand the theory better. Absolutely to keep (or improve if possible :)). The teachers listen, understand and adapt to the situation (especially for those who are not familiar with the Python language). Thanks for that ! The availability of the teachers. | Guided readings take time, and there is not always enough of it (in consideration with other courses). Also, some questions are difficult to answer for people who have never really done research before, like citing examples of ML applications in environmental problems. It is especially necessary to adapt the level in python and in a general way of the ideas of machine learning because by taking everything from 0, that gives an important workload. | Given our background, this is a very difficult course to take at first. But with perseverance, we end up understanding better and especially feeling more at ease. It's quite rewarding!!! |
| Awesome learning material (notebooks, books) Availability of teacher and assistant | As a Msc in geography student, the articles presented in the weekly readings are very hard to understand - except the one from [un·e enseignant·e]. | Weekly quizzes on readings are awesome and help to know what is important in the chapters but can be a little discouraging as some of them are difficult. Also thank you for this course! |

students evaluation of teaching

Machine Learning for Earth and Environmental Sciences (Spring 2022)

T. Beucler, M. Gomez

Spring 22

13 respondents



UNIL | Université de Lausanne

Centre de soutien
à l'enseignement

| | | |
|---|---|--|
| ML is powerful tool and useful skill | The learning curve is too steep. | |
| There is an appreciation that everyone is coming from different levels of understanding and backgrounds, and I think the labs are well adapted to the various levels of coding ability. This is the best course I have taken during my master's in terms of developing skills in a programming language, as the labs do not just require us to copy-paste code, but we have to also think of our own code and make adjustments. The course is very well organised (syllabus, moodle & calendar always up to date). The professors are helpful, show interest in the subject, and are available to answer questions. | Scheduling on the weeks where there is one 5 hour block session would be better as two sessions. The amount of time required for reading is quite high, but I don't think this could be easily reduced as it's clearly useful. | |
| Practice with notebooks | The statistical knowledge is too advanced. No course in the Bachelor gives you the required knowledge to follow the course as "Remote Sensing" or "Watershed Modelling". Sometimes I just get a feeling of what the chapter of Geron and the lecture address, I just have a vague idea of the techniques. I could never describe them to someone. | |
| The teacher is the main strength, both for his enthusiasm and for his willingness to answer questions/take time to help students individually with their final project. In addition, he was able to adapt some aspects of the course based on student feedback, which I find very mature and certainly not for granted. The second strength is the structure of the course. It is in fact very well organised, both for the lecture part and for the laboratory part (the notebooks are didactically excellent, guiding the student fluidly through the process). | The weak point of the course is definitely the amount of work/quantity of information. Three/four notebooks + two readings per week, also calculating the final project, are excessive due to the fact that we also have to work for other courses. Moreover, the fact that we have to deal with a different algorithm every week makes it difficult to assimilate the concepts, as the pace is too fast. | One piece of advice I would give would be to restrict the number of algorithms covered, focusing more on the retained ones so that each student has time to assimilate the material. Or, another idea would be to run the course over a full year, covering all the topics (for example, do ML1 in autumn and ML2 in spring and maybe split machine learning and deep learning). |
| Really professional, I liked the attention putted on inclusivity, complexes concepts are explained in a clear and simple way, the teacher is super dynamic and you can feel his passion for ML | Even if it clearly explained, the concepts are new, complex and a lot. Globally I think it is too much ambitious and should be splitted into 2 courses. | |

students evaluation of teaching

Machine Learning for Earth and Environmental Sciences (Spring 2022)

T. Beucler, M. Gomez

Spring 22

13 respondents



UNIL | Université de Lausanne

Centre de soutien
à l'enseignement

| | | |
|--|--|--|
| <p>Broad overview of several methods and applications Motivation and interest of the teaching staff</p> | <p>Normal as it is the first year of the course but sometimes it felt a bit "rushed" to stay in the allotted time of the class. The lab on a Friday morning is also not ideal for the participation, maybe just after class as in the later weeks would be better</p> | <p>Sometimes the wording of the quizzes with (double) negation is a bit hard to get around for a non native speaker.</p> |
| <p>It's give a good overview and strong bases on Machine learning A lot of practices. I like how the course is constructed. We see that is clear and the teacher know where he goes (It's not always the case for the other courses)</p> | <p>There is a lot of work for "just" 5 credits. The readings of chapters are difficult because it take a lot of time to understand well. We can see it only in lectures. Personnally I don't read really good. So at the end my goals is just answers the questions but not understand the topic. Moreover, 4 notesbook per week is too much if we have to do our project.</p> | |