Report - ID2214 - 2020-02-06

Respondents: 1
Answer Count: 1
Answer Frequency: 100.00%

Please note that there is only one respondent to this form: the person that performs the course analysis.

Course analysis carried out by (name, e-mail):

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COURSE DESIGN
Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering.

The course was given for the second time, in period 2, 2019.

There were four group assignments (with up to three students in each group) and one written (individual) examination.
The first three assignments concerned implementation of various preprocessing and evaluation techniques, as well as learning algorithms, while the fourth and final assignment had the format of a data science project, where the students were given access to a dataset and a formulated task, requiring them to preprocess the data and apply learning algorithms, while using a sound methodology to fulfil the task.

Changes since the previous course round, as suggested by the previous course analysis:
- the size of the project groups were reduced to three students (from four)
- a new last assignment (the data science project) was developed, which replaced a more research-oriented assignment
- the written examination was changed such that the two course goals are examined separately (with a first part covering theory and a second part covering programming)
- supervision sessions were scheduled

In addition, more course material was provided in Canvas, e.g., Jupyter notebooks, and three new lectures (on linear models, artificial neural networks and methodology) were included.

THE STUDENTS' WORKLOAD
Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If these is a significant deviation from the expected, what can be the reason?

Since the course was given on half-pace, an effort of about 20 hours per week was expected.

5 out of 14 respondents on the course evaluation indicated a higher workload (two substantially higher with 30-35 hours spent on the course per week), while three students spent substantially less (3-8 hours per week).

One reason for the deviation may be the background of the students; some may already have extensive experience in Python programming, which means that they could focus on the other parts, while other students had to struggle with learning how to program in the for them new language.

THE STUDENTS' RESULTS
How well have the students succeeded on the course? If there are significant differences compared to previous course offerings, what can be the reason?

29 students (of 42 registered at the course) showed up on the first written examination; 21 students passed (with a grade E or higher), while five students received the grade Fx, and were given an additional assignment to complete to get the grade E. the The passing grade will be between 72% and 90%, depending on how many of the students with Fx that eventually will pass, and this is similar to the results last year (76% passing grade on the first attempt).

36 students have passed all assignments.

OVERALL IMPRESSION
Summarize the teachers' overall impressions of the course offering in relation to students' results and their evaluation of the course, as well as in relation to the changes implemented since last course offering.

The course received generally high grades on the LEQ statements. Statement 17 ("My background knowledge was sufficient to follow the course") received the highest score (6.6 on average out of 7), while all other LEQs received grades between 5.5 and 6.0, except statement 15 ("I could practice and receive feedback without being graded"), which received a slightly lower score (4.8 on average). Possible reasons for this is analysed in more detail below (next item in the analysis).

ANALYSIS
Is it possible to identify stronger and weaker areas in the learning environment based on the information you have gathered during the evaluation and analysis process? What can the reason for these be? Are there significant difference in experience between:
- students identifying as female and male?
- international and national students?
- students with or without disabilities?

Regarding the LEQ 15 ("I could practice and receive feedback without being graded"), I (still) partly agree with students who were less satisfied with this aspect, as the students were graded on all assignments. However, some students still took the opportunity to ask for feedback on their work before submitting it (which of course did not affect the grades). Consequently, there was no consensus among the students; five of the 14 students gave this LEQ one of the top two scores, while one student gave one of the two lowest scores.

PRIORITIZED COURSE DEVELOPMENT
What aspects of the course should be developed primaily? How can these aspects be developed in short and long term?

One aspect that should be improved concerns LEQ15; there should be more opportunities for receiving feedback without being graded. This may perhaps be combined with one student suggestion to have a (non-graded) assignment on basic Python. Also, the supervision sessions should be better advertised as opportunities for receiving feedback.

The feedback on the assignments need to be improved; it should be both more timely (provided within a week after the deadline) and the reasons for the grades should be more clearly stated.

Some suggestion was also put forward that the students should spend less time on implementing algorithms and more time on applying them. In particular the third assignment could benefit from making use of existing implementations, rather than requiring that almost all parts are implemented from scratch. This would allow for more advanced methods/techniques to be considered, which also would be of more practical relevance for future projects.