Report - ID2221 - 2024-10-19

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):

Amir H. Payberah, payberah@kth.se

DESCRIPTION OF THE COURSE EVALUATION PROCESS

Describe the course evaluation process. Describe how all students have been given the possibility to give their opinions on the course. Describe how aspects regarding gender, and disabled students are investigated.

I use two evaluations in my courses—one in the middle and one at the end. The mid-term evaluation helps me understand students' feedback on the course as it progresses, and I can make small adjustments based on their comments. While mid-term changes are usually limited to minor updates, the final evaluation allows me to make more significant improvements when preparing the course for the next round.

DESCRIPTION OF MEETINGS WITH STUDENTS

Describe which meetings that has been arranged with students during the course and after its completion. (The outcomes of these meetings should be reported under 7, below.)

In the course, we conducted oral presentations for the final project. During these presentations, we met with each group of students (typically two to three per group) individually. Additionally, we held two evaluations—one after week three and another at the end of the course.

COURSE DESIGN

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

This course covers various advanced topics in data-intensive computing platforms for storing and processing big data. The main objective is to provide students with a solid foundation for understanding large-scale distributed systems used to handle massive data. After completing the course, students should be able to:

ILO1: Explain fundamental concepts of data-intensive computing platforms, such as the shared-nothing architecture and dataflow programming model, and describe how massive data processing platforms function.
ILO2: Store and retrieve data in distributed systems, including distributed file systems and NoSQL databases, and implement various queries over them.
ILO3: Process different types of data—structured, streaming, and graph—using large-scale processing platforms such as Spark.
ILO4: Build advanced applications using data-intensive platforms, develop scalable solutions on a cluster, and process large-scale datasets.

The course includes several tasks, each assessing different ILOs:
Task 1 (Review questions): These questions are designed to encourage students to review lecture notes and papers by asking relevant questions for each lecture. (P/F)
Task 2 (Two lab assignments): The lab assignments are intended to introduce students to various challenges associated with storage and processing platforms. (Optional)
Task 3 (Essay and presentation): This task involves a deep dive into one of the course modules, studying relevant papers, preparing an essay, and presenting it at the end of the course. (A-F)
Task 4 (Final project): The goal of this task is to implement an advanced application for processing large-scale data. (A-F)
Task 5 (Final exam): The final exam covers all course content. (A-F)
Compared to last year, we have added Task 3 and made Task 2 optional

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?

I added Task3 as an assignment to encourage students to study one of the course modules critically.

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?

Three students didn't pass the course, and over 80% got grades C or higher.

STUDENTS´ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

* What was the best aspect of the course?
- The best part of the course for me was the lectures. They were really engaging.
- The course is excellent in introducing modern challenges in the data-occupied world and the solutions by different tech giants to tackle those problems.
- Amir is a great teacher and lecturer. The content of the course is perfectly picked. I felt that every lecture Amir gave was great and that every lecture I missed was a loss. High level of interaction really helped me understand, please keep it up with Menti's and whatnot.

* What would you suggest to improve?
- In my suggestion, timely feedback on the assignments could be improved.
- Provide more real world examples.
- There are too many topics and the course looks like a lot for one period so students can get lost easily on which topics to focus on.

SUMMARY OF STUDENTS' OPINIONS

Summarize the outcome of the questionnaire, as well as opinions emerging at meetings with students.

The students were happy with the course structure, topics, and assignments. However, I may need to reduce the course load for next year.

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.

Overall, the students expressed a positive evaluation of the course, with all LEQ statements scoring more than 4 and most of the statements scoring between 5 and 6. There were no significant differences in evaluation from different groups of students.

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?

The highest scores were on questions 11 (6.4), "Understanding of key concepts had high priority", 9 (6.3), "I understood what the teachers were talking about", and 6 (6.3), "The atmosphere on the course was open and inclusive", and the lowest scores were on the questions 14 (4.1) "I received regular feedback that helped me to see my progress", 15 (4.8) "I could practice and receive feedback without being graded", and 20 (4.1) "I had opportunities to influence the course activities". The main issue is the lack of feedback, which is mainly due to a lack of human resources for the course, e.g., TAs.

PRIORITIZED COURSE DEVELOPMENT

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

We are restructuring some of the lectures to include emerging technologies and skipping some of the old ones. Moreover, the course load should be revised for next year.