Report- AH2307-2025-01-16

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

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1.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.

Two course evaluations were conducted. The first survey aimed to understand how students were following the course and to determine any necessary adjustments. The questions were designed not only to gather feedback but also to remind students to actively engage with the course. This survey was shared during a lecture break on November 21, 2024, and distributed via a Canvas announcement. It remained open for three weeks, achieving a high response rate of 23 out of 33 students.

The second survey was sent out automatically through the Canvas platform between January 13, 2025, and January 24, 2025. The response rate for this survey was lower, with 13 out of 33 students responding.

Additionally, students were encouraged to provide direct feedback to instructors during lectures or through Canvas communication channels. Office hours were made available for students to express concerns and ask questions. Some students also communicated with the course teacher and assistants via email.

2.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 addition to scheduled lectures and lab sessions, extra sessions were offered by the teaching assistant to address student questions. Individual oral assessments were arranged to evaluate project work. After the exam, students were invited to an exam evaluation session, where they received answers to exam questions and had an opportunity for discussion.

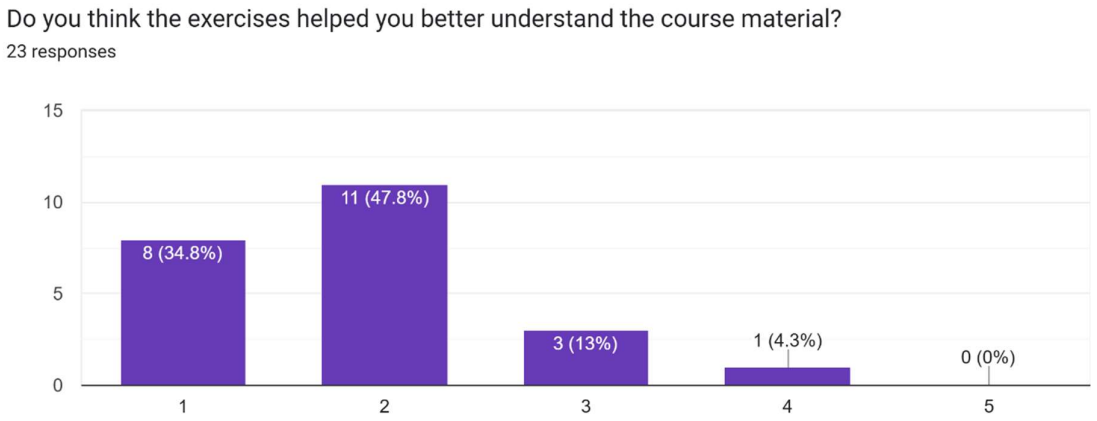
3.COURSE DESIGN

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

The overall course structure remained consistent with previous years, consisting of lectures, lab assignments, and projects. Labs and projects were conducted using Python with updated inputs. Students were provided with a Python manual and additional office hours for assistance. The assessment methods included a project with a report and oral evaluation, along with a final digital exam.

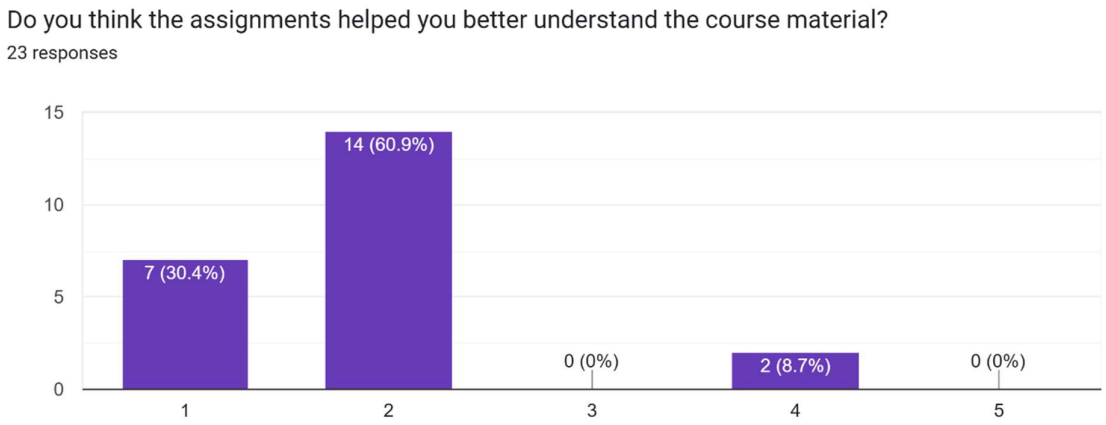
Two exercise lectures were introduced: one on "Logit and Nested Logit Model Application" and another on "Trip Generation and Distribution." Mid-term responses indicated a positive reception to these additions. The assignments were revised from three parts in HT2023 to two parts in HT2024. These changes aligned the assignments more closely with the course project and intended learning outcomes. Student feedback on the assignments was also positive.

Student feedback on new exercise lectures (scale: 1 = strongly agree, 5 = strongly disagree):



1: strongly agree | 5: strongly disagree

Student feedback on assignments (scale: 1 = strongly agree, 5 = strongly disagree):



1: strongly agree | 5: strongly disagree

In the second survey, students were asked whether "The course design provided good support for my learning," with 70% responding "somewhat agree" or "strongly agree." This indicates positive feedback on the course design.

4.THE STUDENTS' WORKLOAD

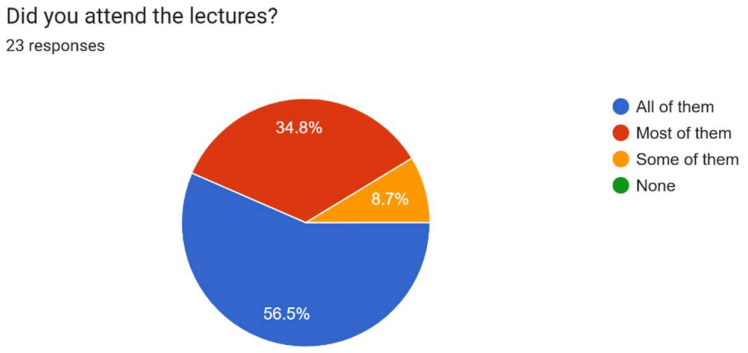
Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If these is a significant deviation from the expected, what can be the reason?

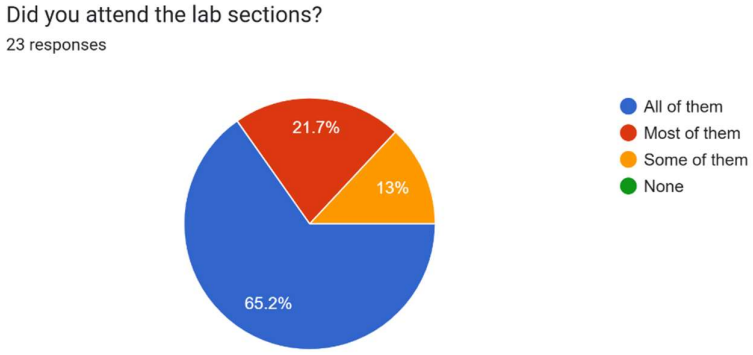
A mid-term survey included questions on student engagement levels. The goal was to assess student participation in teaching-learning activities and to emphasize the importance of active engagement for achieving higher learning outcomes.

Key findings:

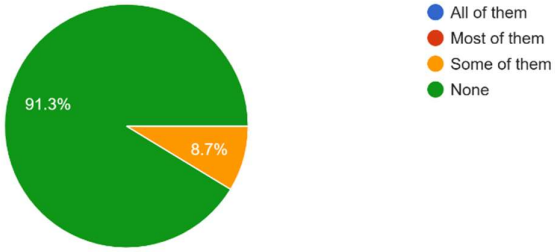
- Lecture and session attendance was acceptable.
- Fewer than 50% of students regularly read the course literature, making lecture attendance essential.
- Very few students attended office hours.

On average, the workload met expectations, with most students spending 15–17 hours per week on coursework. However, one student reported spending 27–29 hours per week, suggesting a possible issue with prerequisites. Below the percentage charts were displayed.

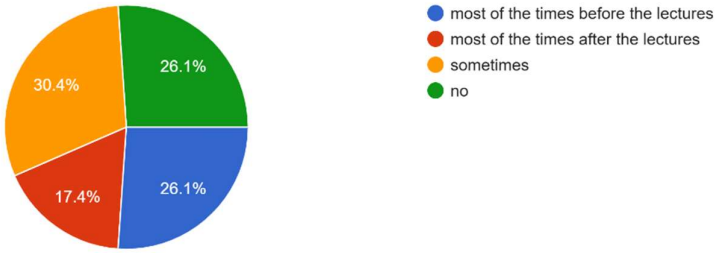




Did you attend any office hours?
23 responses



Did you read the recommended literature?
23 responses



In the second survey, students were asked general questions about workload and learning engagement:

- **70% of students** somewhat/strongly agreed that "The course had a reasonable scope and workload."
- **90% of students** somewhat/strongly agreed with "I participated actively in the different parts of the course and studied continuously."

5. 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?

34/35 students passed the PRO1 with one student who stated that she participates the course for interest but not for credits. 28 students passed the final exam out of 32 who participated in the digital exam. The students have achieved higher grades on average. This improvement suggests a positive impact from the additional assignments and modified labs.

6.STUDENTS´ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

Overall, students found the course challenging yet stimulating. They provided positive feedback on the project, noting that it was engaging, connected to real-world problems, and allowed for creative exploration. The redesigned labs and projects also received positive feedback.

7. SUMMARY OF STUDENTS' OPINIONS

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

Students generally responded positively to the course:

- **100% of students** somewhat/strongly agreed that "The course feels relevant and has helped me develop my competence."
- **100% of students** somewhat/strongly agreed that "I felt included and respected in this class."

Students appreciated the support from the lecturer and lab assistant. They found the lectures informative but noted the high number of formulas. The project and labs were seen as interesting and stimulating. Many students preferred a written exam format.

8. 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 overall impression of the course was positive in terms of student results, feedback, and engagement. Students actively participated in discussions and provided continuous feedback on lectures, exercises, labs, and the project. However, there is room for improvement, particularly in updating course content to reflect advancements in urban modelling and decision-making.

9. 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? Is there significant difference in experience between: - students identifying as female and male? - international and national students? - students with or without disabilities?

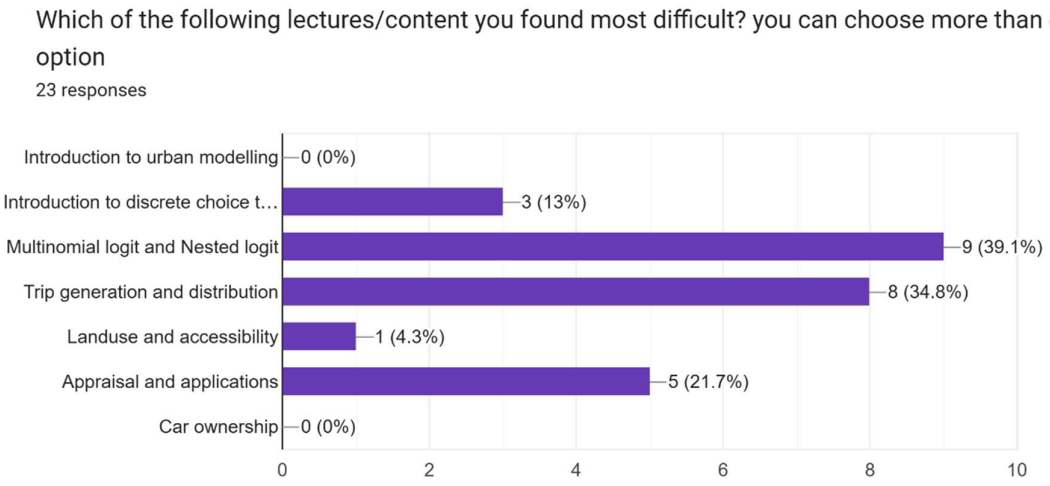
There were no significant differences in experience between students based on gender or nationality. One student with a documented disability (Funka student) was granted extra time for the final exam.

10. PRIORITIZED COURSE DEVELOPMENT

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

Since the project received high ratings from students, lab sessions will be reorganized next year. Students were asked to indicate which topics were most challenging. Content related to appraisal and applications could be expanded, and more interactive teaching-learning activities could be introduced.

Student feedback on self-assessment (scale: 1 = strongly agree, 5 = strongly disagree):



1: strongly agree | 5: strongly disagree

In the second survey, students were asked: "The course gave opportunities for monitoring my own progress and understanding what I needed to do to succeed." Around 55% somewhat/strongly agreed, indicating a need to improve self-assessment opportunities for students to monitor their progress.

11. OTHER INFORMATION

Is there anything else you would like to add?

Based on student feedback, the scheduling of lectures and labs on the same day was changed this year. Lectures were spread across two days, allowing students more time to prepare and absorb the material. The impact was clear, and this schedule will be maintained in HT2025.

Additionally, a mid-term course survey distributed during lecture time provided more timely feedback, allowing for adjustments to teaching and learning activities. This approach will also be continued in HT2025.