

Report - MJ2381 - 2023-10-17

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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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.

In this course round, student representatives were unfortunately not formed from the beginning, and the dialogue has been weak. A must for improvement into next course round 2024. A course evaluation was issued towards the end of the course, running for three weeks, beyond the last formal course deadlines. Students were frequently encouraged to submit responses. Still only 8 out of 58 registered to the time. Still, valuable insights were given by those 8.

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.)

N/A

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 re-structured to a large extent, as compare to the previous course round. The learning outcomes are the same, but the examination and learning activities have been changed, for better focus and to support learning. Three projects now constitute the examination, which also drives the learning. All are graded A-F.

PROA (1.5 ECTS) Understanding linear programming and the long term energy system modelling tool OSeMOSYS

PROB (1.5 ECTS) Developing a simple energy system model in OSeMOSYS

PROC (3 ECTS, group project) Country analysis – least cost electrification plan, using OSeMOSYS.

To drive the topical content, of modeling for insights in relation to energy systems and regional infrastructure development, 5 lectures were given. Other learning activities were for PROA and PROB introductory labs, and follow-up lab for students' own work and to encourage interactions with tutors. These two sub-modules were completed during study period 3.

For the larger group project PROC, it was introduced during the first study week, then framed with first tasks of delivering a project plan for formative feedback, and a midterm report and presentation (end of study period 3) for formative feedback on country background and initial model structure. In Study Period 4, additional lab sessions were organized to guide the modelling work and making tutors available. Finally, the projects were presented in seminar sessions (mandatory attendance) as well as through a technical report. All students made individual contribution statements to clarify their role in the project.

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?

As an active teacher in the course, as well as examiner, I observed that students started on the tasks for all PROA, PROB and PROC too late, despite being reminder of the importance of making use of the continuously organized learning activities. Especially during study period 4, we saw that the supporting labs were not so well-visited, and then some project teams run into shortage of time getting a functional model towards the end of the course. These are observations, and it is hard to say that definitely not enough time was spent on the course.

From the 8 who responded to the evaluation, they indicate a work-load range 3-11 hours per week, and if we then anticipate 20 course weeks over the term, this means 60-220 hours. For a 6 credit course, it should be somewhere around 160 hours.

With these two types of input, nothing can still be said about their work load, but one can contemplate that there is room for improvement to support the "right amount of time, on the right type of activities.

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?

Compared to 2022, this year we had 58 students registered of which 52 presently have passed the full course. In 2022, it was 19 and all 19 have now passed the full course. This means we cannot really compare the results. It seems like there is a good opportunity for students to pass the course on time, with a few having problems this year.

If we look at the grades ...

2023: A-8, B-21, C-19, D-3, E-1

2022: A-2, B-15, C-2

In overall, students do well in this course.

STUDENTS' ANSWERS TO OPEN QUESTIONS

What does students say in response to the open questions?

Some of the best aspects of the course are listed as:

- The Group Project (PROC)
- Learning OSeMOSYS
- So many interesting insights into developing energy systems

Things to improve:

- Aside from modelling with optimization, get into more energy systems content beyond [MJ2508] (CLEWs, also for this minor course)
 - More OSeMOSYS support and labs
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SUMMARY OF STUDENTS' OPINIONS

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

Base on the comments given by those generous 8 who answered the survey, my general impression of the students' opinion about the course is confirmed. I saw a huge engagement from students in relation to the country analyses, and how to generate insights on how best to decarbonize energy systems, and more. At the same time, a variety of difficulties exist with regards to getting the model to run properly -- not all students are used to work with modelling tools. Realizing at the end of the course that once model is "still" not working must be very stressful, and de-motivating. At that time, the scheduled labs (that were NOT well-attended) were gone, and tutors may not have been available for detailed de-bugging.

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 is that this is an engaging course, with great potential (number of students doubled between 2022 and 2023) but that there is a need to continue to improve quality in order to better support continuous learning (and work) throughout the course, and avoid demotivating problems with the modelling tool itself.

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?

No, too few participants in the survey I would think. Among those who answer, there is really no difference.

PRIORITIZED COURSE DEVELOPMENT

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

Student involvement, and formative quality and learning environment evaluation. Unacceptable the way this was not included in the past course round.

In addition to previously scheduled lab sessions, include a few more "open" sessions where students can come for support, still with focus on the early parts of the course. We do NOT want to encourage people to start too late on their models. We need to support the other direction. Consider CLEWs aspects in the minor course as well? This will be more longterm though.