

# Course Analysis – MJ2438 Modeling of Energy Systems – Heat and Power

Spring term 2024

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.

The course has been evaluated by the students by means of the course evaluation questionnaire provided by KTH in its 22 questions format. A specific question for the involvement of disabled students and any specific issue is included.

2. DESCRIPTION OF MEETINGS WITH STUDENTS: Describe which meetings have been arranged with students during the course and after its completion.

No specific meetings have been arranged

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

The course is organized with a set of theoretical lectures, which have been extended with respect to the previous course offering to reflect the overall course extension from 3 to 6 ECTS, during P3. During P4 the course primarily focus on group project work putting in place and trying all the concepts and modelling techniques described in the theoretical part. The evaluation is based on a group project report and peer review report.

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

Most students report effort in range 9-11 h/week <sup>2</sup> in line with expected course effort (~160 h).

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?

6. Large modifications have been made to the course so the comparison with previous years is not very relevant at this stage. However, the students' results are within the typical distribution, so no major issue is highlighted on this point.
7. STUDENTS' ANSWERS TO OPEN QUESTIONS: What does students say in response to the open questions?  
The main feedback from the students report that the course was: Interesting, challenging, stimulating, practical, creative, "I wish the course could be bigger". Overall, the effort was uneven between the periods and more supervision would have been helpful in the project group work.
8. SUMMARY OF STUDENTS' OPINIONS: Summarize the outcome of the questionnaire, as well as opinions emerging at meetings with students.  
Overall, the students found the course interesting, dealing with relevant topics. They were able to apply and test their own ideas. The course atmosphere was open and inclusive. On the negative side the course lacked opportunities for regular feedback and support during the project work.
9. 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 impression is positive. The students had the opportunity to face interesting and challenging topics in a positive environment. The expansion of the theoretical part included as a major change with respect to the previous offering of the course has been received positively. The open choice of the modelling software is also seen as an advantage with respect to the previous constraints. Further improvements are needed with more frequent home assignments during P3 and a more dedicated support and feedback session during P4. Higher TAs involvement will be needed (depending on the number of students).
10. 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 be? Are there significant differences in experience between:
  - a. students identifying as female/male? Very similar evaluations, slightly worse for women (in average)
  - b. international/national students? Generally worse evaluation from national students
  - c. students with/without disabilities? NaN

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

- a. Feedback and support structure → increased involvement of TAs
- b. Identification of evaluation (even self-evaluation) mechanisms during P3 via dedicated home assignments