

# Course Analysis EI2220/EH2221 HT2018-VT2020 (1.5 credits/yr)

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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.**

This course serve, for one thing, to evaluate and develop the programme. At seminars teachers are asking the students about their general situation and the programme in particular, of which this course is an integral part. Hence, all students are given plenty of opportunity to discuss the course.

We strive towards a gender and cultural neutral discourse, no major improvements found. But since it is part of the course this was discussed and analyzed extensively.

Spring 2020 we went for 100% e-learning .

## 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.)**

All students have had meetings with one mentor/teacher in a discussion seminar with emphasis on that all should participate actively. In total 7 meetings (one startup meeting and 6 seminars).

## 3. Course design

**Describe briefly the course design, the constructive alignment (intended learning objectives, learning activities, assessment, and how they interact), and the development that has been implemented since last course offering.**

The course consist of six seminars and a final assignment. For every seminar the students reads up on a topic and then write a short reflection on this topic. Prior the seminar students and teachers read the reflections. During the seminar the topic is discussed.

Learning outcomes are tested and evaluated in hand in assignments and at the seminars.

Updates of learning outcomes and grading criteria (alignment). Learning outcomes were adjusted to better reflect the course content as well as support an efficient grading process. Mainly it was a reformulation of the leaning outcomes with more focus on active learning. The grading was adjusted to give a bit more room for formative grading of students.

Learning outcomes 2018 (this run of the course)

- After completing the course, the students should be able to:
- Understand and discuss key issues of the role of engineers in the society.
- Understand the role of electric power engineering in society, and its role in achieving economically, socially and ecologically sustainable development.
- Be aware of and show respect to scientific, social and ethical aspects of research and development.
- Be aware of our responsibility for how technology is used, including social and economic aspects as well as environmental and safety aspects.
- Be aware of the ethical and cultural issues and differences in an international environment.
- Discuss and lead discussion on high level considering the above topics, present arguments based on scientific results.

Updated learning outcomes for 2020

After passing the course, students should be able to:

- discuss central questions linked to the importance of engineers in society
- discuss and analyse the role of electric power engineering in society and its role to reach economically, socially and ecologically sustainable development
- discuss and analyse scientific, social and ethical aspects of research and development
- discuss and analyse human responsibility for how the technology is used including aspects of social, economic, environmental and working conditions
- discuss ethical and cultural questions and differences in an international environment
- discuss the above-mentioned subjects at a high level
- present arguments based on scientific results
- meet deadlines
- write short, clear, analyses including one's own analyses.

#### **4. Students' workload**

**Are the students working to the expected extent in relation to the course credits? If there is a significant difference from the expected, what can be the reason?**

In a previous questionnaire the course was identified as one of the "cheapest" courses credits/h. The workload hasn't increased since then. The assessment is that the current state is appropriate. One issue is connected to the question regarding if all students read all assignments from their respective group (around 8 pages). Since this is assessed in group it is only possible to see that most have read significant parts of the pages.

Most students are meeting expectations. Some students don't take deadlines very seriously, but this will be addressed more clearly in the grading.

## **5. Students' results on the course**

**How have the students succeeded in the course? If there is a significant difference compared to previous course offerings, what can be the reason?**

A high success rate. Due to the course running over 2 years of the programme failing the programme in general will result in a failed course, but not the other way around.

## **6. Students' answers to open questions**

**What do students say in response to the open questions?**

Mostly feedback on the programme.

Feedback on the course is that sometimes changes of times for meetings with mentors (typically professors in the program) are tricky to handle (not all seem to check their KTH email and canvas regularly).

## **7. Summary of students' opinions**

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

The student seems to like the course but it is perceived as a "soft" course. But most realize its value with respect to the programme.

Some frustration in connection to seminars

## **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.**

In general very good.

E-learning support was smooth for this course, due to its form.

## **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? Are there significant difference in experience between: - students identifying as female and male? - international and national students? - students with or without disabilities?**

The weakest part this year was the IT-support, it basically couldn't support one and a half lab. I am surprised that we didn't get more negative feedback on this. Why we "got away" with it is most likely due to efforts from Sanja and understanding students (that got a bit lessened burden, impacting learning to some degree).

No significant difference in experience detected.

#### **10. Prioritized course development.**

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

Implementation of the new learning outcomes and aligned grading.

Important to stress how deadlines work in connection to seminars (or how they are somewhat disconnected).

Assess the need for questionnaires. The current assessment is that the character of the course gives ample room to get feedback from all students. We should really see the need for a questionnaire if we want to use one (important to not water down questionnaires).

#### **11. Other information you want to share.**

The course is important from programme perspective, important to assess changes from CELTE, CENMI and TELPM perspectives.