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## Report - SD2150 - 2019-11-08

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Respondents: 1  
Answer Count: 1  
Answer Frequency: 100.00 %

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**Please note that there is only one respondent to this form: the person that performs the course analysis.**

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

Ulf Carlsson, ulfc@kth.se

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**COURSE DESIGN**

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

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The course spans over 2 periods. In the first period the course participants should learn and exercise,

- structure dynamics fundamentals
- experimental methods to acquire necessary data and
- process data to extract structure dynamic models.

In the second period the participants work in project groups with an industrial test object.

The course material consists of

- a compendium,
- a set of presentations,
- a collection of calculation problems
- a set of video-clips accessed via Scalable-learning

Learning activities:

The idea is to use learning activities that promotes participant activity and collaboration among participants.

Activities promoting learning of basic theory consist of

- prepare for class meetings with video-clips including short quizzes and material from compendium.
- class meetings with key concept discussion and demonstrations
- problem solving home assignments
- reporting experimental investigations.

Activities promoting practical experimental skills are

- two laboratory exercises and
- a project on an industrial test object.

The examination consists of three parts:

- Computer and laboratory exercises, Pass/Fail. Pass requires participation in data acquisition, data processing and a short report with sufficient quality.
- Project, P/F. Pass requires participation in data acquisition, data processing and reporting.
- Oral and written examination, A - F. Examines participant's ability to understand, explain, experimentally determine and use structure dynamic concepts and models in a critical way.

Final grade equal to grade on written examination with possibility to increase one step with a high quality oral examination result.

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#### **THE STUDENT'S 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?**

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The workload is as expected (12 – 14 hrs/week) considering the course credits 9 hp.

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#### **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?**

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The results are good and has improved. One possible reason is improved information on the course requirements.

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#### **OVERALL IMPRESSION OF THE LEARNING ENVIRONMENT**

**What is your overall impression of the learning environment in the polar diagrams, for example in terms of the students' experience of meaningfulness, comprehensibility and manageability? If there are significant differences between different groups of students, what can be the reason?**

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From the average learning experience polar diagram the learning experience is very good. One observation is that there is a significant difference between "Swedish" and "International" student's replies. On average international student's are roughly +1 unit compared to Swedish. A possible explanation is the difference between the learning environments on KTH and on their home universities.

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#### **ANALYSIS OF THE LEARNING ENVIRONMENT**

**Can you identify some stronger or weaker areas of the learning environment in the polar diagram - or in the response to each statement - respectively? Do they have an explanation?**

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No, overall good.

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#### **ANSWERS TO OPEN QUESTIONS**

**What emerges in the students' answers to the open questions? Is there any good advice to future course participants that you want to pass on?**

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Keep up with video-preparations and assignments.  
Work continuously - Do not postpone the work.  
Ask questions.

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#### **PRIORITY COURSE DEVELOPMENT**

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

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The understanding of the numerical procedures used for model parameter estimation needs to be improved.  
More focus is to be put on the numerical data processing.

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#### **OTHER INFORMATION**

**Is there anything else you would like to add?**

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