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Course analysis SF1633/SF1676, VT22, P4

Course analysis carried out by:

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Course design:

Course was offered on campus, including examination, with exception of online computer graded homeworks and online office hours.

-Lectures: 20 meetings (2x45min).

-Exercises sessions were offered in five groups on campus, 12 meetings (2x45mins). Plus one group compared to earlier years with approximately the same number of students.

-Online computer graded exercises using the platform WeBWork of the Mathematical Association of America, <https://openwebwork.org/>

-Weekly office hours on zoom.

-LMS Canvas is systematically integrated in the course design.

-Only SF1676: Group project (PRO1, 1.5hp) in civil engineering towards the end of the course. Some project are suitable for students in datateknik.

-Examination concept: Written exam (4h). Bonuspoint system: Up to 10% bonus based on results for online computer graded exercises.

Course results after regular exam:

SF1633:

- A: 7.8%
- B: 2.9%
- C: 21.4%
- D: 26.2%
- E: 24.2%
- F: 15.5%

SF1633 tentander: 103

SF1676:

- A: 14.2%
- B: 8.3%
- C: 29.7%
- D: 17.8%
- E: 19.1%
- F: 10.7%

SF1676 tentander: 89

Number of registered and re-registered students: 248 (source Canvas). Students writing the regular exam: 192 (source Ladok). Passing rate is slightly higher to previous years, with CSAMH AK2 performing slightly better than CMAST AK2.

Summary of student's opinions:

-Average response to LEQ statements does not indicate significant problems with the course. Unfortunately, very few students chose to fill out the LEQ. Also students did not choose to form a kursnämnd, despite several invitations, but this changes from year to year (why?).

-Students emphasized the following: The course was challenging in a stimulating way. Differential equations allow them to solve problems they could not before. The assessment was fair and honest. Students appear to like the course literature. Students seem to appreciate the online graded homework and the associated bonus system, big majority of the students earned more than 85% of the bonus points. Course literature seems to be considered good.

-The feedback on the project in SF1676 was positive.

Examiners assessment and recommendations:

Return to campus worked okay, though some students after such long absence from campus have troubles following lectures, e.g. processing information, taking notes and possibly troubles concentrating for a longer period. Some students are loners after the long time absent from campus, I hope with the buzz group activities in the lectures and with the smaller exercise groups, we could counter act. Time management problems can occur when using student centered-activities in lectures.

An issue was that not many students use the opportunity to take the LEQ. I presume this is not only due to the form of the LEQ, but also partly caused by the fact that student chapters organize their own course surveys. I believe we should have a simplified LEQ, reduced to 'What was good', 'What can be improved', etc. On course level find ways to motivate students to take part in kursnämnd.

Course developments: Refine and review the current grading criteria, some students have problems understanding the continuous grading scale used. Review examination concept for written exam and reconsider examination time (3 vs 4 hours). Some weaker students do not attempt to solve problems on the exam aimed for higher grades, which is a clear sign of surface procedural learning strategies.

For SF1676, conference meeting with PA and all teachers in CSAMH program is going to take place under the HT22. PA feedback on course offering in VT22 was positive.

Long term development: Which part of blended or online teaching activities could be useful in the future? For example, can videos from the previous year be implemented in a systematic way? Online graded homework for other mathematics courses? A project (1.5hp) for CMAST students in SF1633?

Technical developments: In large lecture halls, the simultaneous use of the board and ipad connected to projector works surprisingly well. Find good strategies to use both alongside.

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