

## Protocol for the final course evaluation meeting of the course DIT022 Mathematical Foundations for Software Engineering

Programme: N1SOF

Academic year: 1

Term: 1

Date: 2019-11-26

**Attending:** Richard Berntsson Svensson; Programme manager, Christian Berger; Examiner, Course responsible; Katja Tuma, Linn Holmeskog; Education administrator, Bhavya Shukla; Student representative, Annan Lao; Student representative.

**Absent:** Tina Mathé; Study counsellor, Oscar Hjern; Student representative.

### Summary

Participants: 91

Respondents: 41

Answer Frequency: 45,05%

Written exam: U: 24 (failed), G: 48 (Pass), VG: 5 (Pass with distinction)

Assignments: U: 21 (failed), G: 62 (Pass)

Course grade: G: 45 (Pass), VG: 4 (Pass with distinction)

### Prior Knowledge

The students had split/divided opinions about the prior knowledge need for this course but most of the students answered that they were neutral to if their prior knowledge was enough for them to be able to follow the course. All students have different mathematics background and some of the respondents in the survey mentioned that basic knowledge from level 3-Math from a Swedish high school/gymnasium was not enough or at least some of those with no other background struggled to keep up with the course pace.

### Learning outcomes

The learning outcomes was presented by the course examiner during the first lectures of the course. The student representatives mentioned that many of the students had to focus on just passing the assignments and examination instead of focusing on the actual learning outcomes throughout the course. Most of the students answered that they mostly agreed or were neutral to their awareness of the learning outcomes.

### Execution of the course – Course structure/teaching/literature/Examination

The students had divided opinion about the course structure, but the majority of student responded in the survey that they disagreed when asked if the course structure was appropriate in order to obtain the learning outcomes of the course.

The course was divided into two blocks focusing on different aspects of the mathematical foundations, which was communicated from the examiner in the beginning as well as during the midway evaluation. It was also communicated that during the first lecture of the week the focus

would be the course script to prepare the students for the exercises and TA-sessions later in the week. The student representatives mentioned that more examples and explanations during the lectures would have helped.

The student representatives also mentioned that the structure was fine during the first block and the first four-five weeks of the course, even though it covered 5 topics and the pace was too fast. When the second block started with statistics, it was harder to follow the structure and prepare for the correct topics before the lectures. Many students only prioritized the lectures in the beginning of the week and skipped the other lectures. The student representatives mentioned that many of the students didn't now have basic knowledge in statistics and it would have been helpful with more visual tools to demonstrate during the statistic lectures.

The respondents in the course survey also mentioned a suggestion of improvement with the structure could be to change the order of the different lectures, exercises and TA-sessions. The student representatives agreed, and the teacher and examiner will look into to this for next year.

The course script was an appreciated ingrediency in the course, but it was updated with changes during the course which was confusing for the students. The students used the script differently, some used it to prepare before lectures, some after lectures and some just before the examination. The course representatives mentioned that the course script supplemented the lectures and the other way around.

The examination received a neutral score (3.0) in the survey. The respondents in the course survey mentioned that the examination was harder compared to last years written exams and one problem was the time limitation. The examiner commented that the level of difficulty was the same as previous years, but the content and instructions for each question had increased to explain each question better for the students, which might have taken longer for the students to read before answering each question. Student representatives mentioned that the examination covered more or less everything of the course content.

### Work climate/Work load

The majority of course survey respondents answered that the workload in relation to the number of credits was too high. Some students skipped lectures etc in the other course they had in study period 1 to be able to coop with the study pace in DIT022. Most of the students spent around 30 h / week including lectures/lab and self-studying.

### Overall impression

The overall impression received a score of 2.2 and a neutral to very bad impression from the respondents in the survey. The student representatives mentioned that the overall impression was very good and all foundations in math you need as a software engineer is covered in this course and it's a great foundation to have to succeed in the following courses included in the program. They also mentioned that how the course was taught, and the structure could be improved. The first 5 weeks covered 5 topics and the pace was too fast. The statistics block needs to have more and better explanations and preferable visual tools. The respondents also mentioned that it was a challenging course which they learned a lot from.

### Suggested improvements

- Make adjustment to the course structures and change set up of the scheduled activities in the course during each week. For example: 1. Lecture → 2. Exercise-sessions → 3. TA-sessions.
- Clarify what the students can and should expect from each section/activity in the course.
- The course script has to be looked at and correction read to make sure it does not include typos and wrong content. If the course script has to be updated during the course, this has to be specified and communicated to the students.