

## ***Course Report WASP Graduate School***

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### **Software Engineering and Cloud Computing, 6 hp**

Semester: Spring 2023

Number of registered students: 53

Answering frequency (course evaluation): 19/53 (36%)

### **Examination results**

Number of students examined: 53

Fail: 6 (8.8%)

Pass: 47 (91.2%)

### **Brief summary of student viewpoints and suggestions**

#### **Results of WASP base-line quantitative questions**

- What is your overall rating of the course: **3.89**
- Did you enjoy the course: **4.11**
- Was it time well spent: **3.63**

#### **Answers to free text-questions to be (shortly) summarized under “Strengths” and “Weaknesses”**

- What was the best aspect of the course?
- What would you suggest improving?
- What advice would you like to give to future participants?
- Other comments. Is there anything else you would like to add?

#### **“Strengths” according to students<sup>2</sup>**

- The tour of the data centre in Umeå (multiple students agreed on this)
- The software engineering module is pleasingly broad
- Opportunity to learn useful things that can help student research
- Discussion on Software vs AI engineering was a good exercise; interesting to hear perspectives of others
- Both modules were from an high-level perspective, so understandable

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<sup>1</sup> The report should be written by the examiner together with the teachers and possibly others, such as teaching assistants

<sup>2</sup> Based on both quantitative results and key viewpoints from students' free-text answers

## **"Weaknesses" according to students<sup>2</sup>**

- Both modules were a bit exhausting listening to professors go through slides; should be more discussions in lectures (multiple students agree on this)
- Add more practical assignments instead of essays for both modules (multiple students agreed on this)
- Would be nice for Software Engineering to have more focus on software knowledge
- A broader view of AI would be nice, not directly related to machine learning
- Content is too basic / people from the same research theme should be enrolled so material can be tailored (multiple students agree on this)

## **Comments from teachers on the implementation and outcome of the course<sup>3</sup>**

- Both modules ran into the problem that the students come from a broad range of areas; several students appreciated the breadth of scope, while one or two others strongly felt that the content did not have enough technical "depth".
- For the Cloud computing module, there are two clear messages from the students that I also felt while teaching the course – not enough discussion time, and not enough practical assignments. This will be rectified in the next iteration.
- There was strong criticism from 1-2 students on the lack of depth of the modules; however, others praised the modules for being broad. It is difficult to design a course that can adequately cover both experts and those new to an area. This is an area for discussion going forward.

## **Proposed changes/comments/measures**

- Cloud Computing module: remove the essay based assignment and spend more time on the practical assignment based around the WARA-Ops infrastructure.
- Cloud Computing module: move some lecture content to online to free more time for class discussions and exercises (e.g. partial flipped classroom approach)

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<sup>3</sup> Including changes effected during the course