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## Report - DD2481 - 2019-12-05

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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.**

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

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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.**

The course is concerned with the study of fundamental principles of modern programming languages. The course is designed to enable students to transfer theoretical knowledge into practice using lab assignments that are closely aligned with a series of 12 lectures. Another important learning activity is the writing of an individual essay discussing open questions related to an advanced topic in programming languages. Students are free to choose a topic from a list of suggested topics, or, alternatively, suggest a topic of their own, subject to approval by the course responsible.

Examination is based on three elements: first, a theory exam (TEN1) with grading scale A-F (2.5 credits); second, lab assignments (LAB1) with grading scale P/F (3.5 credits); third, an essay (UPP1) with grading scale A-F (1.5 credits).

The main change implemented since the last course offering consists of new lectures on advanced topics including semantics of object-oriented languages (Featherweight Java) and low-level languages (WebAssembly). The goal of this change was to enable students to transfer core concepts of programming languages to real-world languages. These new topics could then be chosen by the students for the essay.

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**THE STUDENTS' 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?**

According to the results of the LEQ survey, all respondents indicated that they spent 20 hours or less per week on the course which matches the expected workload. However, there also seems to be a small group of students who spent less time than expected on the course. This confirms an observation from the previous course analysis. To address this issue, we plan to introduce theory exercises which can be discussed during exercise sessions with the goal of providing (a) early opportunities to practice, and (b) feedback for teachers on challenging topics of the course.

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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?**

In this course offering, 39 students completed all parts of the examination, which is a slight increase over the 37 students of the previous offering. Of all students who were registered, 66.1% completed the course. 13% received grade A, 36% received grade B. Thus, overall students succeeded very well on the course. In addition, in the last course offering, 41% received grade A, which suggests that the previous course offering was perhaps less challenging. However, the results for the current course offering appear to be more in-line with our initial expectations.

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### **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.**

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After compiling the results of the course evaluation and discussing them with student representatives, the following aspects of the course emerged. On the one hand, people liked the lectures, and were very happy with collaboration and feedback. People thought that the labs were one of the best parts. Students also liked the focus on key concepts, and overall the subject was interesting to most students.

On the other hand, the following opportunities for improvement were discussed. To get a more even distribution of the workload, it could be helpful to assign deadlines to lab assignments and perform evaluations throughout the course. A few students struggled with the new topics introduced in the current course offering which we plan to address by adding more practice exercises and improving the structure.

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### **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?
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Based on the polar diagrams of the LEQ survey, the following stronger areas can be identified. First, in terms of meaningfulness, students strongly agreed that they worked with interesting issues (average response 6.6 on a scale from 1 to 7). Students also strongly agreed with the statement that the "atmosphere on the course was open and inclusive" (average response 6.3 on a scale from 1 to 7). Other strong areas are high priority of understanding key concepts (average response 6.5), and sufficiency of background knowledge to follow the course (average response 6.6). Students also strongly felt that they were able to follow during the lectures.

There mostly 3 weaker areas related to feeling togetherness as well as feedback. For the next offering of the course, we plan to address these issues by (a) introducing structured exercise sessions, and (b) group work for the lab assignments.

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### **PRIORITIZED COURSE DEVELOPMENT**

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

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Our long-term plan is to provide constructive alignment of all course activities. In the short term, we plan to implement the following activities for the next course offering. First, well-structured exercise sessions to receive and provide early feedback. Second, group work with clear submission deadlines for lab assignments.

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### **OTHER INFORMATION**

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

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The above issues were also discussed in the course meeting which was held on 10 September, 2019, 14:00-15:00.

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