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## Report - SI1410 - 2019-12-15

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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):**

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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 aims at giving an introduction to modeling dynamical systems. The course consists of 6 modules (1 per week). Each module is centered around a topic and consists of four activities, a lecture, a workshop (in groups of 4-5, in the absence of a teacher), an exercise session (where the problems attempted in the workshops are solved) and a computer lab (done in pairs). The activities are designed to complement each other. Two individual computer lab reports are graded (1.5 credits each) and the final written exam accounts for 3 credits. The exam has 4 problems and each of them should be passed to pass the exam, the final grade is a result of the individual grades. We have a midterm in an empty week in the middle of the period so the students can practice. This is graded for reference but the grades do not count towards the final grade. However, one grade from one exercise that was successful can be transferred from the midterm to the final exam, in case one exercise is failed on the exam.

Following the 2016 course evaluation, the structure of the course was modified. The total material was reduced, the modules were introduced as well as the workshops and the corresponding exercise sessions. The grading system was modified to ensure all the intended learning outcomes are fulfilled upon passing the course.

Following the 2018 course evaluation, we added few lectures. Instead of one single lecture, we had two lectures for modules 1, 2, 3 and 5. We also increased the quantity of practice problems by providing all past midterms and exams, including a selection with correction.

Following the 2019 course evaluation, the focus will be on increasing the perception of fairness around grading, and we will provide the grading schemes used for the three exams in 2019 as well as the one used in 2020 after each KS and exam.

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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 average reported time spent in 2017 was around 12-14 hours per week, the average reported time spent in 2018 is around 18-20 hours, the average reported time spent in 2019 is 15-17 hours.

Having an extra lecture seems to slightly decrease the time spent on the class, possibly by enhancing the perceived understanding of the material.

18-20 hours is however what should be expected from the students.

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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?**

The student results are stable in 2017, 2018 and show a noticeable improvement in 2019. The grade distribution during the first session of the 2018 exam is as follows (16F, 7E, 6D, 15C, 10B, 4A), the success rate being 72%. In 2019, it is (12F, 11E, 7D, 9C, 6B, 8A), bringing the success rate to 81%.

We notice that the distribution of passing grades is flatter, less peaked around C, which could indicate that a strong head of class has an overall positive influence on the overall results. The exam this year was perceived as difficult (see course evaluation), which is interesting given the students' good performance. I believe this group of students was particularly ambitious, translating into high performance as well as high anxiety.

### **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?**

The overall satisfaction has gone up compared to 2018. Due to the low response rate (25%), we still capture mostly very positive students as well as a few negative opinions. The students still think they work on interesting issues, that they have an open atmosphere and can work by talking to others, and seem to particularly appreciate the structure of the course which provides a clear structure.

As mentioned in the previous class edition, despite having been provided with more study material, they still ask for more practice exercises and corrected exams.

It is not possible to look at gender differences since too few men answered the survey (this cohort contained a surprisingly large number of women). Comparing the satisfaction of women in 2018 and 2019, overall perception is much improved. I suspect that a large women body of students, including high performing students is overall positive for the confidence level of women.

### **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?**

The area to improve the most is the assessment. Even though our assessment is clearly fair, it is not perceived as such. In 2020, we will provide the 2019 evaluation system on the KS and 2 exams. We will also make available the grading system used in 2020 after we are done with the correction.

### **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?**

The students seem to appreciate the course structure and the lectures, they appreciate the extra lectures which were introduced in 2019. Some think the pace is too high and that their background knowledge is not sufficient.

The workshops are highly appreciated, up to a point that it might be difficult for a lot of students if they don't do them.

A couple of students seem dissatisfied and to have not understood the course structure. I wonder if making some activities mandatory (workshops, for example) would improve understanding.

The program was reorganized and for the first time there were some complaints that the class taken at the same time was time consuming which led them to be very tired by the end of this period.

### **PRIORITY COURSE DEVELOPMENT**

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

Regarding improving the perception of fairness of grading, we will provide the 2019 evaluation system on the KS and 2 exams. We will also make available the grading system used in 2020 after we are done with the correction.

To help with the perception that workshops are too hard, we will have a teacher or TA present during the workshop. The difficulty of the exercises for week 1 will also be decreased to ease students into the class.

The computer labs take more time than the time spent in the lab, advice will be given to start the computer labs before the time allotted to be able to ask questions on the difficult parts when a TA is available.



**OTHER INFORMATION**

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

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It would be useful to have a higher response rate on these evaluations. With this system we tend to capture very positive and very negative opinions and lack the bulk of the responses.

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