

## **Course analysis DD2435/FDD3435 HT22 Mathematical Modelling of Biological Systems**

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### **Description of the course evaluation process**

The course evaluation was initiated in due time via Course evaluation tool on the Course Social page for the duration of two weeks. Evaluation was anonymous giving students possibility to freely express their opinions.

### **Description of meetings with students**

Students had opportunity to ask questions and discuss the course organization before the lecture start and during the breaks in the middle of the lecture. Teachers were always accessible via email as well as zoom, this practice continued despite returning to on-campus format after remote teaching during COVID19 period.

### **Course design**

Course structure remain unchanged which includes lectures 1-8 and laboratories 1-3 contributing to the written examination in period 1, as well as two additional lectures, one laboratory and an independent work on a research project (a reading project or a small modelling study) in period 2. The major difference was in returning to on-campus teaching after COVID19 outbreak. Laboratories and written examination remained in the digital format. Course content is distributed between three teachers, Alexander Kozlov, Erik Fransén and Arvind Kumar, each teaching within the areas of their expertise.

### **Students' workload**

Estimated time spent by students for the course up to 11 hours/week, mean 7 hours/week, is evaluated as adequate with sufficient time dedicated to laboratory works. The mean workload is still lower than expected and may be explained by uncertainty of the format of regular meetings, i.e. mixed in-person and digital forms.

### **Students' results on the course**

Students' performance at the written examination was higher than usual with more than half A-B grades out of the total number of the course participants. This could be attributed to the transition from remote to on-campus teaching for the lectures combined with the open-book remote written examination which proved to be easier to complete in comparison to fully remote format of the course in COVID19 period.

### **Students' answers to open questions**

Students find the course content interesting and inspiring in general.

### **Summary of students' opinions**

Students' evaluation of the course is generally positive. Certain difficulties were caused by the split of the course to two periods when some students had hard time planning for laboratory and a project simultaneously in period 2.

### **Overall impression**

The course is well balanced, stable and mature by the impression of the teachers and students. The most part of the course is made of the classic introductory material to the fields of computational neuroscience and biological modelling. Nevertheless, several topics need to be updated with respect to the modern development of the research areas, in particular, the list of the recommended reading for students' research projects.

**Analysis**

Not all students realized that the material included in laboratories 1-3 during period 1 is not completely covered in lectures and must be studied independently on one's own. Students tried to optimize their workload and tended to split their responsibilities during preparation of the lab reports. This led to omission of some material not present in lectures. It did not affect, however, students' performance at the examination since they were able to quickly read up on the missed material during open-book examination, although this put unnecessary stress on them. The course traditionally draws attention of exchange students who make up to 1/3 of the total number of participants. No gender preferences were noted. Few students with reading or attention disabilities (1-2 per course round) never complained on the course organization and showed equal performance with other students.

**Prioritized course development**

The main goal for the next course round should be full transition to on-campus teaching on all activities including laboratories and examination leading to updated content and better engagement of the students.

**Other information**

N/A