

Course Summary for *Programming for Applications in Geomatics, Physical Geography and Ecosystem Science*, NGEN13 HT 2021.

Course coordinator: Per-Ola Olsson

Teachers in the course: Per-Ola Olsson, Mitch Selander, David Tenenbaum (GIS project)

Number of students: 12 registered students

Grade distribution: 2 UK*, 2 G, 18 VG.

*Two of the students with grade = UK have not yet finished the final project (2022-04-01), and the needs to retake the exam. All plan to finish the course.

Evaluation

Summary of the course evaluation

Number of survey responses: 9 which is 75 % of the students

In general the students were very satisfied with the course (overall score of 3.6, on a scale 1-5) with a grade of 3.7 for the Python part of the course and 3.3 for the GIS project. The students were mostly happy with the feedback and work from teachers as well as with the course materials. A few students did complain they did not get sufficient help with the GIS project but in online mode when students are working on their own computers with different installations it is not easy (possible) for a teacher to solve all technical issues.

Comments from the teaching team

The course was updated and changed to a pure Python and GIS programming course to fit with the new planned master in GIS and remote sensing. In the previous version the students had 2.4 weeks with Matlab first in the course. The course was once again given online due to Corona and it seems to work fine. After more than one year online students were more used to distance teaching. The overall grade of the course was a bit lower than previous year; this seems to mainly be due to (1) a few students having technical issues with the GIS project when working on their own computers and (2) that more students than usual knew programming already before the course started and considered the early part too easy. The technical issues with the GIS project will not happen when the course is given online and we cannot change the course so it assumes a prior knowledge in Python (got a suggestion to skip the intro part) when it is an introductory course, but we can try to adapt the course better to the vast differences in skills between students. That will be the main focus for next year.

Evaluation of changes implemented since the last time the course was given Due to the large changes from previous year we cannot evaluate changes from previous versions.

Suggestions for changes to implement before the course is given the next time One issue with the course is that there is a very large difference in knowledge among the students. Some know programming already when they start the course and some are completely new to programming. And some learn programming fast while some struggle to get into the thinking that is needed for programming; that is a common problem with programming courses. To get a better balance we created additional tasks for the students that are on a higher level. A main change for next year is to add more additional exercises for the students that finish the course material faster.

2022-04-01, this summary was done by Per-Ola Olsson