

Course Summary for Programming for Applications in Geomatics, Physical Geography and Ecosystem Science, NGEN13 HT 2018.

Course coordinator: Per-Ola Olsson

Teachers in the course: Per-Ola Olsson (Python), Vaughan Phillips (modelling project), Mitch Selander (Matlab), David Tenenbaum (GIS project)

Number of students: 16 registered students, 15 active

Grade distribution: 5 UK, 3 G, 8 VG.

Out of the 5 students with UK, 2 have quit the course (more than usual but both had problems to learn programming, 2 are still planning to finish the course and 1 has not been active.

Evaluation

I. **Summary of the course evaluation**

Number of survey responses: 6 which is 40 % of the students

Short summary of the evaluation responses: In general the students were very satisfied with the course (overall score of 4.3, on a scale 1-5). The students' grades the two first modules of the course (Matlab 2.5 weeks, Python 3.5 weeks) equally with 4.5 for both. The project was graded lower with satisfactory grade for the GIS project (3.5 – 4 students) while the modelling project was more problematic with the grade 2.0 which to a large extent was due to 1 (of 2 responding students) gave the grade 1.

II. **Comments from the teaching team**

The course went mostly well. A main concern is the final project in the course. The students do either a modelling or a GIS project but nearly all students do the GIS-project. That is not surprising since many of the students are geomatics students but the workload between the teachers supervising the project is uneven. This year more students (4) than before took the modelling project but a conflict between one of the students (that took the course for the second time but still was struggling with learning programming) and the teacher resulted in an unfortunate situation.

III. **Evaluation of changes implemented since the last time the course was given**

The course is relatively new and has been given five times (starting in 2015) with highest grade in the evaluation the last three years (no major changes were done from 2017). A general comment has been that the first part of the course (Matlab) is a bit easy with low workload. The first year (2015) there were also students that said the second part (Python) was too demanding. We have responded to this and decreased the scheduled time for the Matlab part and extended the scheduled time for the Python part since 2016. We have also encouraged the students that finish the mandatory Matlab exercises early to work on a set of recommended exercises from the course book to increase the workload on the Matlab part of the course. Since the students have very different

backgrounds, some are new to programming while some have worked with both Matlab and Python before, it is a balance to satisfy all students. The pace cannot be too fast since students that have not done programming before need time to learn. The grade from the evaluation has improved with the changes implemented in 2016 and 2017.

IV. Suggestions for changes to implement before the course is given the next time
No major changes are planned before the course is given the next time.

2020-04-23, this summary was done by Per-Ola Olsson