REAL PROJECT ASSIGNMENTS IN THE PROJECT COURSE TEACHING

Petteri Muukkonen
7.3.2023

GEOG-G303

GIS PROJECT WORK

2018-2023

GIS = Geographical Information Systems

BACKGROUND INFORMATION OF THE COURSE:

- 5 ECTS
- MSc level
- Totally 5-8 project goups each year:
  - 2-4 students in each group
- Real assignments
- In English
- Course literature:
  - Kymäläinen et al. (2016). Opas projektityöskentelyyn. [in Finnish] https://helda.helsinki.fi/handle/10138/160099
  - Petersen, C. (2013). The Practical Guide to Project Management. http://worldwideuniversity.org/library/bookboon/the-practical-guide-to-project-management.pdf

LEARNING OUTCOMES

- Project working skills
  - Scheduling
  - Tasking
  - Management
  - Reporting
    - GIS methods
    - Results
    - Oral presentations
    - Poster presentation
    - Written report
- Group-working skills

EXAMPLES OF PROJECT ASSIGNEMENTS (2023)

1. Digitizing Artic shoreline and classifying validation points

2. Calculating land use characteristics for drainage basins for 100 lakes in Finland

3. Planning the University's ecosystem services survey, Maptionnaire

4. University's nature capital survey, spatial analyses: overview of the current material

5. Digitizing past fragmented forest patches from historical open source aerial images

6. Updating and creating course material and exercises for the course "USP-303 Urban GIS and Visual Tools"

7. Creating ArcGIS StoryMaps for education purposes (map literacy)

8. Collecting and analyzing geomedia from the news feeds (thematic maps, cartograms) (map literacy)

TEACHING METHODS

- Contact teaching (14 x 2 h, once per week)

    - Short introductory lectures about various project management skills

    - Some of the contact teaching meetings are just for guidance and help

    - Progress reporting and discussion

- Group working

- Meeting with the client / mentor

    - Possibly presentations for the research group in their team meetings

TEACHING METHODS

- Deliverables:
  - Project plan and scheduling
  - Reporting:
    - Poster
    - Oral presentation
    - Final report
    - Deliverables for the client
      - Maps, datasets, analyzes, tools etc.

INTRODUCTORY LECTURES

- Starting ecture and organizing ourselves

- Scheduling and planning in the project management

- Communication in project working

- Work documentation

- How to write a scientific report or project report

- How to make a scientific poster and how to prepare scientific oral presentation

FIXED DEAD-LINES DURING THE COURSE

- Groups return planning documents and drafts before the lecture

  - To the Moodle discussion chain or Teams' channel

  - Other groups and students can see those

- Fixed intermediate dead-lines give structure to their own scheduling too

- Some challenges especially in the first COVID-spring

COURSE EVALUATION AND GRADING
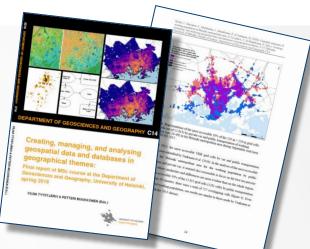
- Grading scale 1-5

- The grading consists of:

  - Group credits:

    - Outcome of the project work 35-45 %

    - Keeping schedules 10-15 %

    - Poster and oral presentation in the final seminar ~10 %

    - Credits gained from peer-evaluations provided by other groups ~10-20 %

    - Peer-evaluations given to other groups 0-10 % (1 page peer-evaluation for each group), return to the Moodle Communication forum of the particular group.

  - Individual credits:

    - Individual self-evaluation 5-15 % (½-1 page)

- The grading formula is always discussed with students in the beginning of the course

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI
Faculty of Science
Petteri Muukkonen
08/03/2023
10

WRITTEN REPORTS

- A scientific report (working paper)

- In English

- To be published in the series "*Department of Geosciences and Geography C*" https://helda.helsinki.fi/handle/10138/43

  - It's our department's forum for working papers, short reports, and seminar works

- The publications of last years' courses:

  - 2018: Creating, managing, and analysing geospatial data and databases in geographical themes, https://helda.helsinki.fi/handle/10138/254913

  - 2019: GIS applications in teaching and research, https://helda.helsinki.fi/handle/10138/309007

  - 2020: Examples and progress in geodata science, https://helda.helsinki.fi/handle/10138/324

  - 2021: Developing learning material and teaching ideas for GIS teaching, https://helda.helsinki.fi/handle/10138/338679

  - 2022: In editor's desk ☺

STUDENTS' FEEDBACK

- Real assignments motivate students

- They have had an option to select the task that interest them

- They valued an opportunity to use skills and tools in practice

  - Problem solving (opportunity and challenge)

- They valued that they had to plan their work before doing

- Some students always start their summer job already in the beginning of May or even April (overlaps with the last meetings)

- Challenges during the COVID-19

STUDENTS' FEEDBACK

- They value that the course provides working life relevant skills such as project management skills

- Diverse backgrounds of students:

  - The course have been open for other study programmes and exchange students

  - Sometimes a challenge

    - Varying background in GIS and geoinformatics

  - But often an advantage

    - They have learnt to work with a diverse group of professionals (from different disciplines)

    - Someone might be excellent in programming, in map visualization, or to write in English.

    - → High working life relevance

STUDENTS' FEEDBACK

- Lazy group members

  - Inequal distribution of workload

  - Challenges to keep schedules

  - Frustration

- Frustration if some group member quit the course.

- Some students have reported that the project work has helped them when applying for a job or study place.

- Some project assignments have been too ambitious or challenging, and therefore the group has not reached the mentor's aims, but otherwise they have succeed well in the course.

THANK YOU!