HL2027 3D Image Reconstruction and Analysis in Medicine – VT2019

Students: 21, Answer count: 12, Answer frequency: 57%

https://docs.google.com/forms/d/1yQdF5h8T1JHF0iEEkvUJ2YqBPloPk8uk7qQ2Q-h68M8/viewanalytics

Students results: A: 4 (19%), B: 6 (28.6%), C: 3 (14.3%), D: 4 (19%), E: 3 (14.3%), Fx: 1 (4.7%)

Analysis of the responses:

1. Learning experience
- In general the tendency of the answers was positive except for the questions: “I was able to get support if I needed it”. The questions with low scores from 2018 were improved.
- In the comments, the students required complained on the work load. This comment was expected in 2018, but was only reported this year.
2. Image reconstruction module
- In general, the students are satisfied with the teaching activities of this module with some room for improvement for the laborations of the CT module.
- The students suggested making labs easier and the slides of CT less complex.
3. Image restoration module
- Students suggest correcting the exercises in class. Their complexity should be lowered.
4. Image registration module
- Students suggest improving the slides and correcting the exercises in class.
5. Image segmentation module
- Students suggest covering less topics in the slides and avoid numerical computations in exercises and move them to the labs.
6. Image analysis module
- They suggest the same as for image segmentation
7. General questions
- Students complain with the workload
- Some students suggest improving/avoiding “fill the gaps” style in labs
- They suggest improvements in the organization of the course and connections among modules.
- Sometimes the level of the exercises was too high and the labs too low
- The model lecture-exercise-lab was appreciated
- The best teaching activities were the labs and the projects
- Having fewer miniexams was suggested
- Access to the servers was not possible for the second project

Action plan:

This is the second time the course is offered after remodeling. This year everyone involved in the course worked on improving their specific parts of the course that were criticized. From the questionnaire, such parts were improved this year. The responses of the students are in general positive which means that our aims were largely attained. Thus, the main structure of the course will

remain next year. The main issues raised by the students this year are related to the workload and the level of exercises and labs.

From the course evaluation, there are specific points we must improve for next year:

- **Organization:**
    - We did all the planned changes after the evaluation in 2018.
    - The reconstruction and restoration miniexams will be combined as well as the segmentation and analysis ones.
    - Some labs will be left optional to the students
    - Restoration will be taught before reconstruction and these two modules will be modified to make them more aligned
- **Teaching activities:**
    - The structure lecture -> exercise -> lab was in general well accepted among students, so we will continue with the same methodology.
    - More guidance will be given in the exercises. They will be revised to make them more workable.
    - The design of every lab will be assessed/modified in order to balance the amount of “filling the gaps” type of exercises with more open questions.
    - The responsible of every module will assess if it is possible to reduce the number of covered topics and increase the depth of some.
- **Learning environment:**
    - Last year some concerns were raised with respect to the question: “the atmosphere on the course was open and inclusive”. From the evaluation, this is perceived as the most relevant issue anymore. Still we will be vigilant on this issue next time.
    - We will encourage the use of electronic platforms to give more support to the students from teachers, TAs and other students.