Geographic information systems for engineers
TE0018, 20190.2324

5 Hp
Pace of study = 33%
Education cycle = Advanced
Course leader = Anders Larsolle

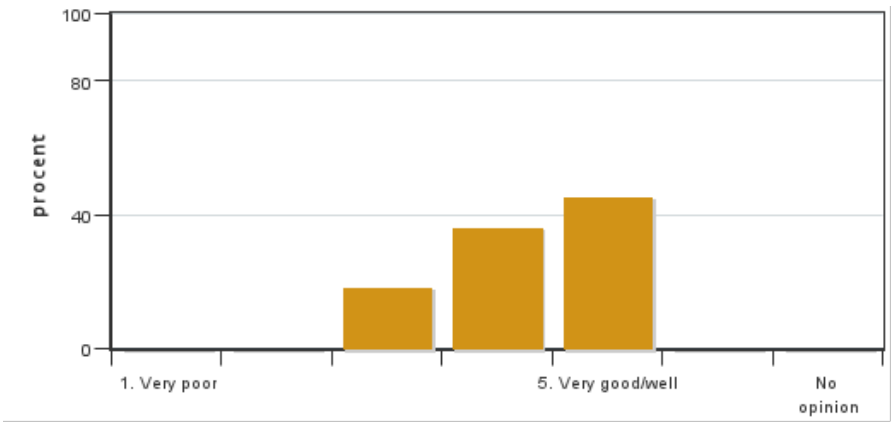
Evaluation report

Evaluation period: 2024-01-07 - 2024-01-28

Answers	11
Number of students	53
Answer frequency	20 %

Mandatory standard questions

1. My overall impression of the course is:

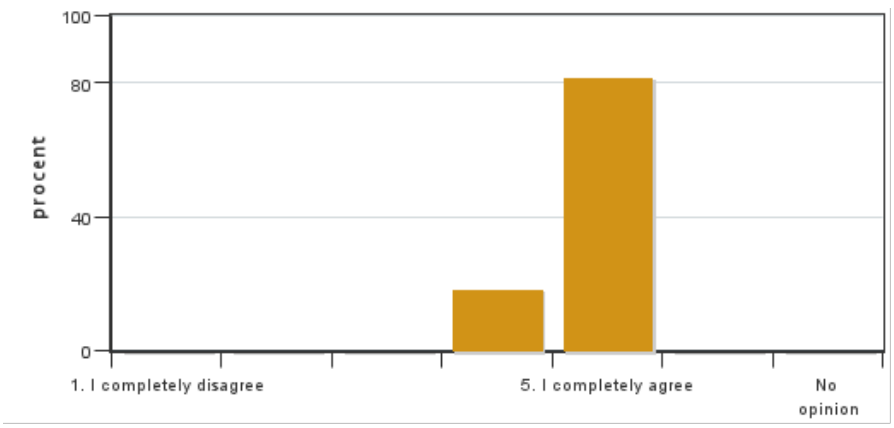


Answers: 11
Medel: 4,3
Median: 4

1: 0
2: 0
3: 2
4: 4
5: 5

No opinion: 0

2. I found the course content to have clear links to the learning objectives of the course.

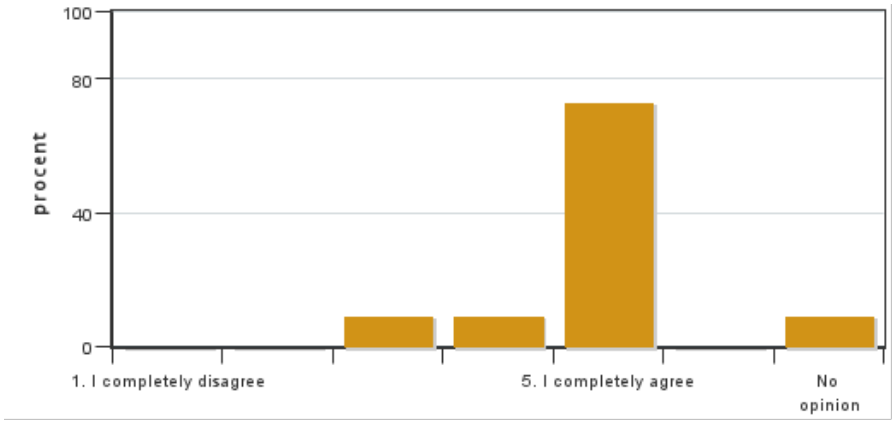


Answers: 11
Medel: 4,8
Median: 5

1: 0
2: 0
3: 0
4: 2
5: 9

No opinion: 0

3. My prior knowledge was sufficient for me to benefit from the course.

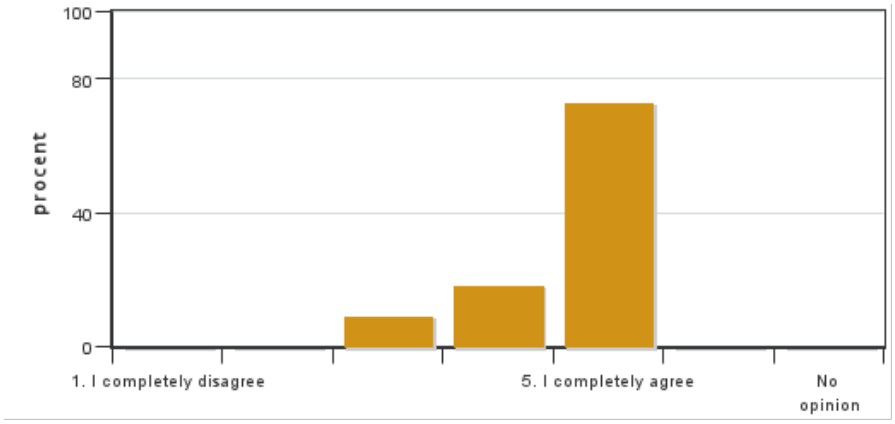


Answers: 11
Medel: 4,7
Median: 5

1: 0
2: 0
3: 1
4: 1
5: 8

No opinion: 1

4. The information about the course was easily accessible.

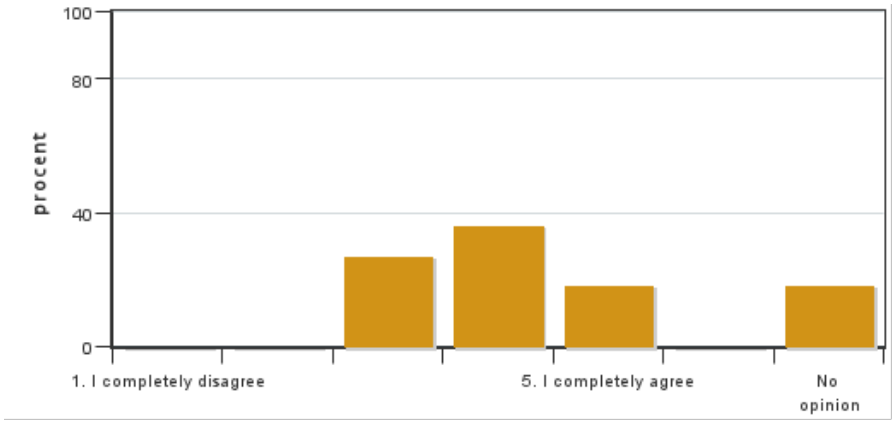


Answers: 11
Medel: 4,6
Median: 5

1: 0
2: 0
3: 1
4: 2
5: 8

No opinion: 0

5. The various course components (lectures, course literature, exercises etc.) have supported my learning.



Answers: 11
Medel: 3,9
Median: 4

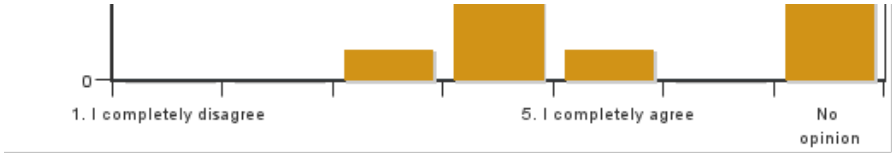
1: 0
2: 0
3: 3
4: 4
5: 2

No opinion: 2

6. The social learning environment has been inclusive, respecting differences of opinion.

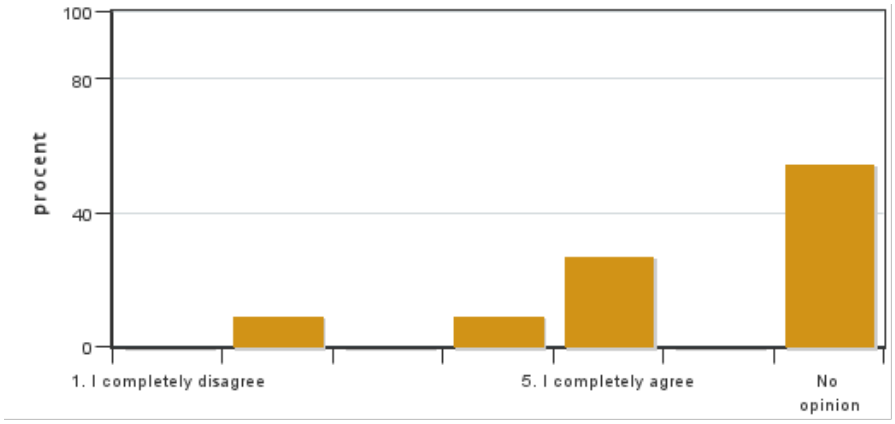
Answers: 11
Medel: 4,0
Median: 4

1: 0
2: 0
3: 1
4: 3
5: 1



No opinion: 6

7. The physical learning environment (facilities, equipment etc.) has been satisfactory.

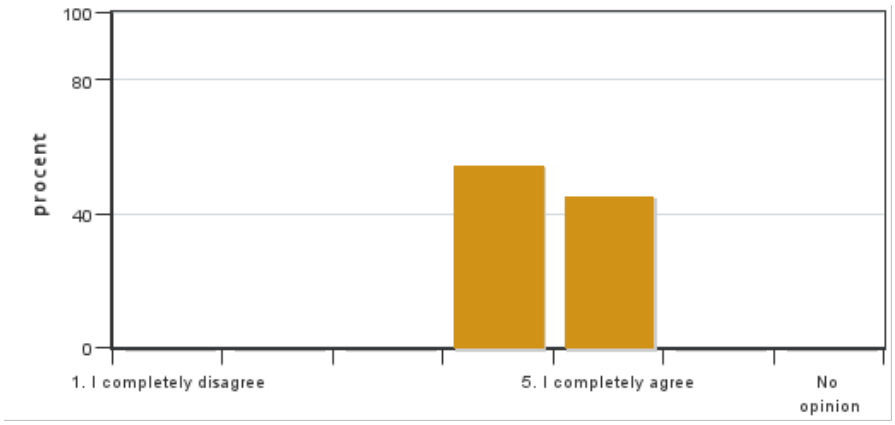


Answers: 11
Medel: 4,2
Median: 5

1: 0
2: 1
3: 0
4: 1
5: 3

No opinion: 6

8. The examination(s) provided opportunity to demonstrate what I had learnt during the course (see the learning objectives).

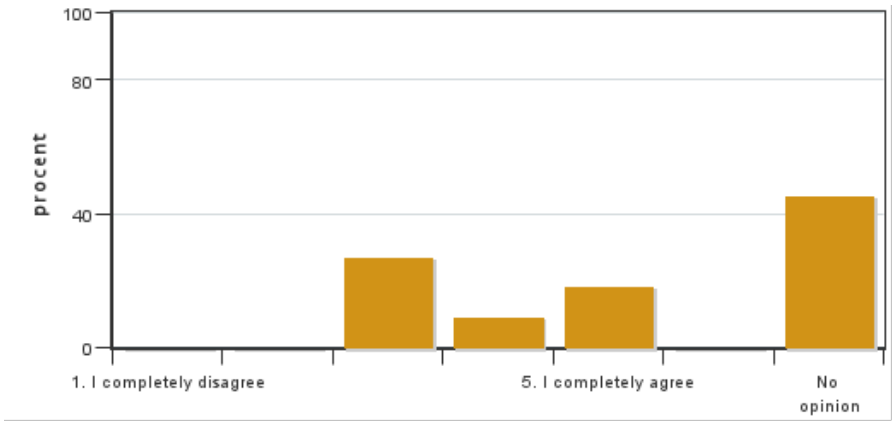


Answers: 11
Medel: 4,5
Median: 4

1: 0
2: 0
3: 0
4: 6
5: 5

No opinion: 0

9. The course covered the sustainable development aspect (environmental, social and/or financial sustainability).

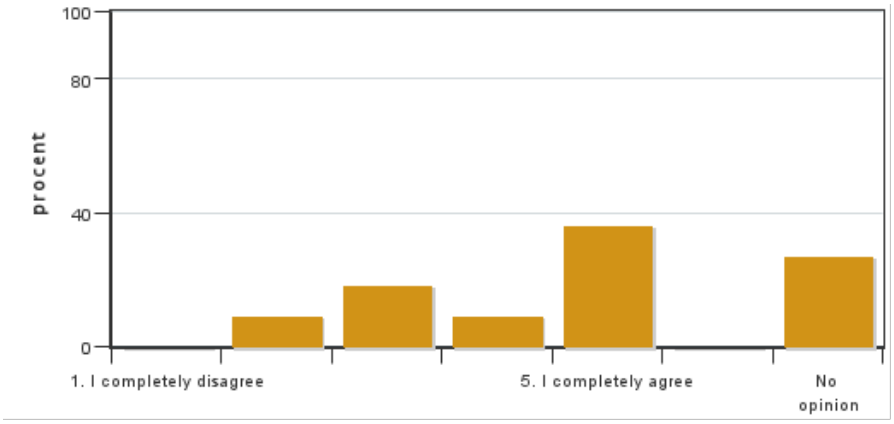


Answers: 11
Medel: 3,8
Median: 3

1: 0
2: 0
3: 3
4: 1
5: 2

No opinion: 5

10. I believe the course has included a gender and equality aspect, regarding content as well as teaching practices (e.g. perspective on the subject, reading list, allocation of speaking time and the use of master suppression techniques).

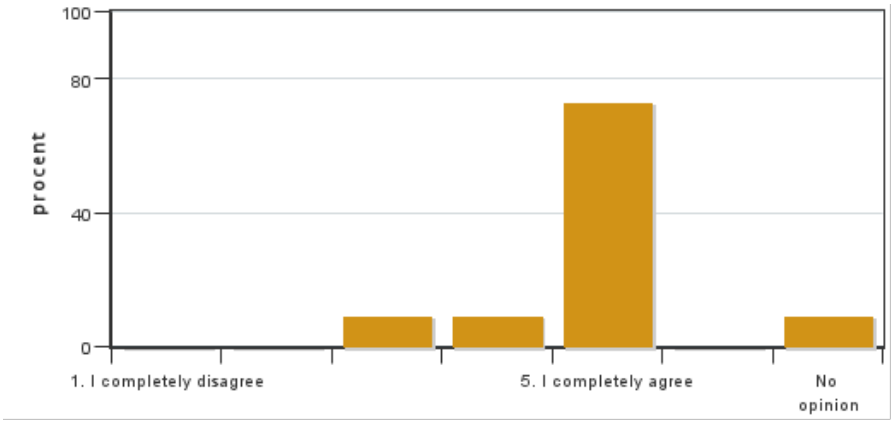


Answers: 11
Medel: 4,0
Median: 4

1: 0
2: 1
3: 2
4: 1
5: 4

No opinion: 3

11. The course covered international perspectives.

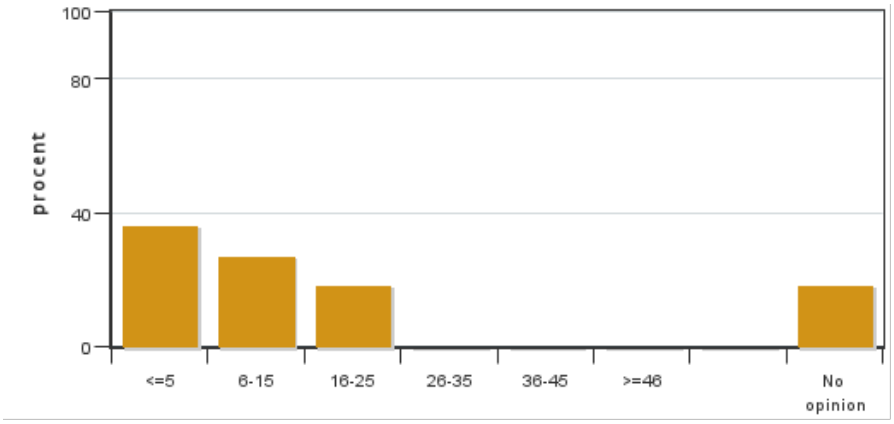


Answers: 11
Medel: 4,7
Median: 5

1: 0
2: 0
3: 1
4: 1
5: 8

No opinion: 1

12. On average, I have spent … hours/week on the course (including timetabled hours).



Answers: 11
Medel: 8,9
Median: 6-15

≤5: 4
6-15: 3
16-25: 2
26-35: 0
36-45: 0
≥46: 0

No opinion: 2

Course leaders comments

The GIS teaching team, which shares a long-time pedagogical interest, has continued to experiment with the pedagogical adaptations enforced by the Covid pandemic and is generally enthusiastic regarding the effectiveness of the resulting teaching, and also regarding the generally positive response from the students. It seems as if the pandemic has offered an incentive for change that was needed anyway, and as if a new era has been entered with the shift towards increasing possibilities for students to participate independently of their physical location. We doubt that anyone truly wants to dismiss such fundamental pedagogical improvements in post-Covid education.
The pre-recorded video lectures can be provided at the pace that the students themselves choose no matter who or where they are and, from a logical point of view, it is far better that the videos are slow than too fast. As a follow-up to the video lectures, we have introduced a new teaching element where we meet live in-house and on-line to discuss the content of the lectures. At these meetings, we can focus entirely on deepening the theoretical discussions regarding the topics that the students themselves address. In addition, project guidance becomes

comfortably available on-line as a complement to in-house supervision, where teachers even may take control of project team computers to demonstrate management and functionalities of complex software. The extensive exercise practice that characterizes GIS teaching has been provided online for more than ten years already.

As a keen educator, it is stimulating to be involved in the development of a new teaching paradigm. As part of the pedagogical method, it is of course particularly important to evaluate the results in order to learn and adjust the new methods introduced with on-line education. Likewise, it is also important to provide the physical spaces required to fulfil student demands regarding the many aspects of physical eye-to-eye contact. The educational element that we do not wish to perform on-line has turned out to be the written exams that seems to be better provided on-site in physical lecture halls.

Student representatives comments

The GIS course has overall been a positive experience for us students. The course clearly linked to the learning objectives, emphasizing the relevance and structure of the course. The majority also found the course information easily accessible, but several pointed out that the course page on Canvas was messy and that the layout and information would have been much easier to access if the page were "cleaned up" and organized better. We students appreciated that the course could be followed entirely online, allowing us to work at the pace we like. However, many students perceived the pre-recorded lectures as long and disorganized, with the pace being somewhat slow. An area for improvement would be to shorten them and try to keep them more consistent. Some participants in the course encountered significant difficulties downloading and using the ArcGIS Pro software, as it requires installing a virtual desktop for many operating systems. An area for improvement would be to have a session where students receive assistance in installing this on their computer, so the first weeks are not spent trying to download a virtualization program.

In conclusion, the students have found this to be an excellent course, with the greatest positive impressions being the ability to follow the course online and the clarity and ease of following the submissions.