Experimental approaches in plant growth analysis and phenotyping BI1339, 10125.1920

15 Hp
Pace of study = 100%
Education cycle = Advanced

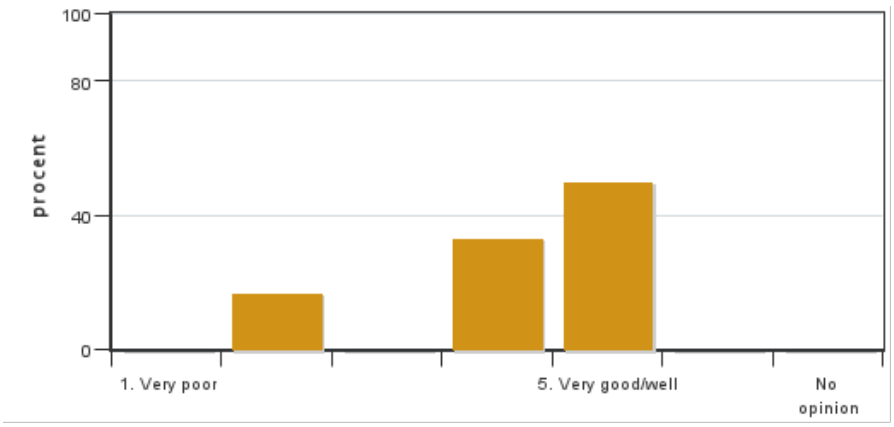
Evaluation report

Evaluation period: 2019-10-24 - 2019-11-14

Answers	6
Number of students	6
Answer frequency	100 %

Mandatory standard questions

1. My overall impression of the course is:

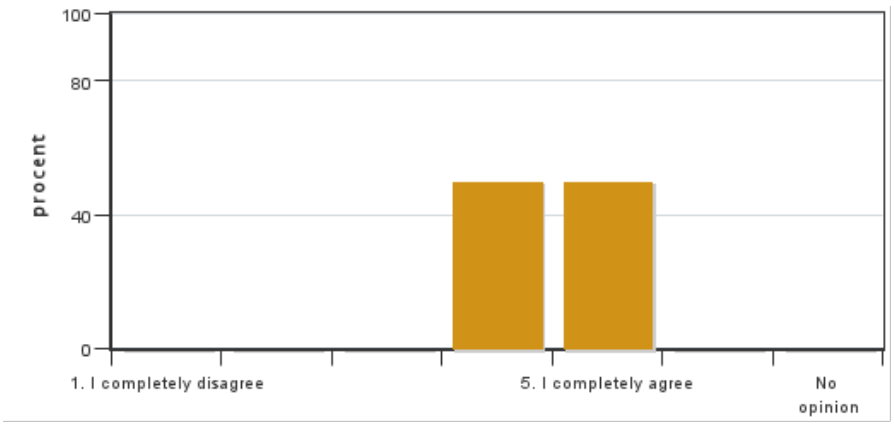


Answers: 6
Medel: 4,2
Median: 4

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

No opinion: 0

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

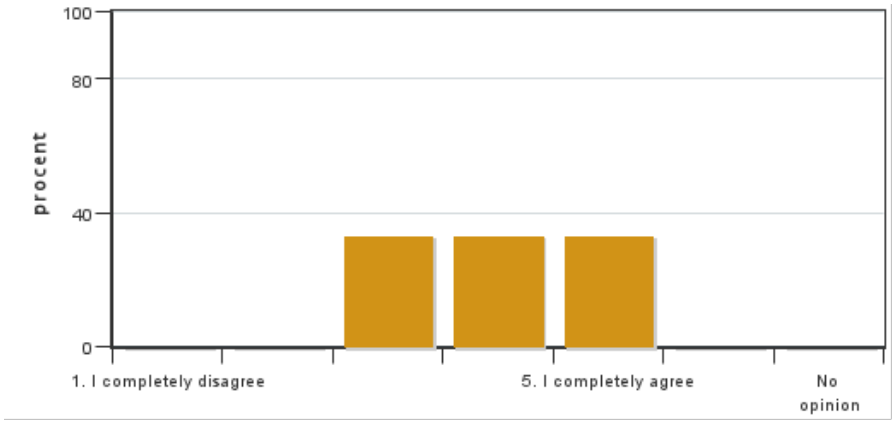


Answers: 6
Medel: 4,5
Median: 4

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

No opinion: 0

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

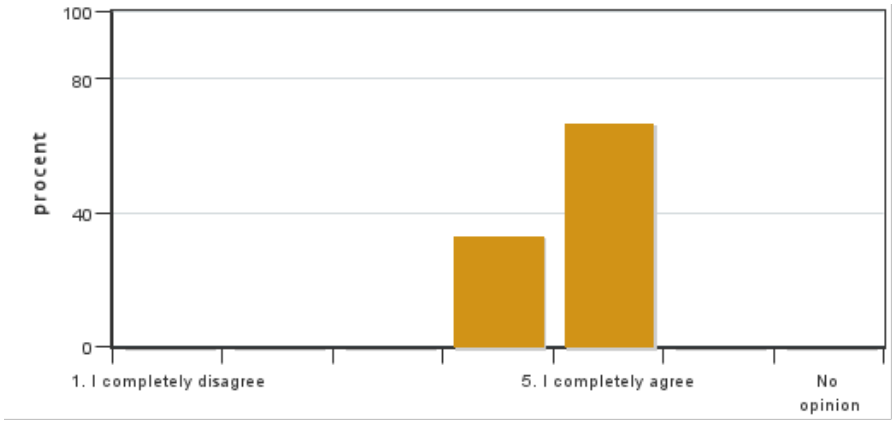


Answers: 6
Medel: 4,0
Median: 4

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

No opinion: 0

4. The information about the course was easily accessible.

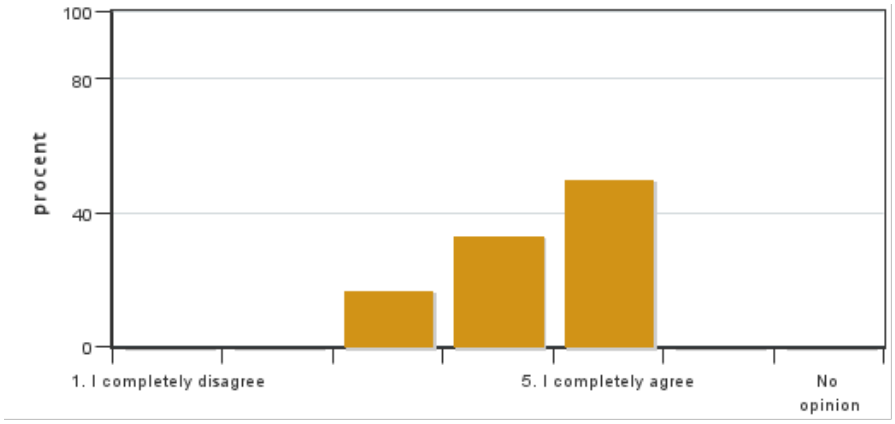


Answers: 6
Medel: 4,7
Median: 5

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

No opinion: 0

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

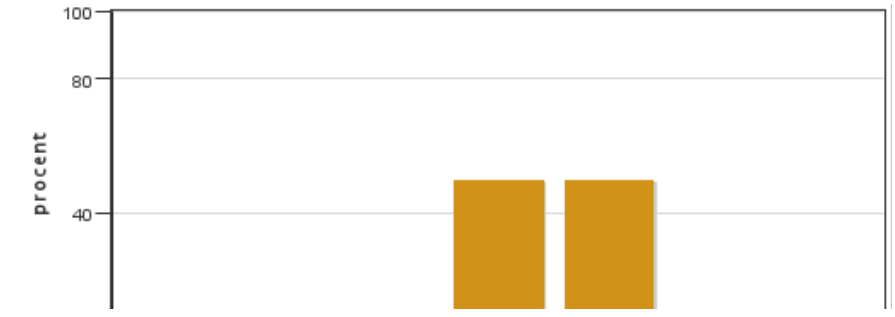


Answers: 6
Medel: 4,3
Median: 4

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

No opinion: 0

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

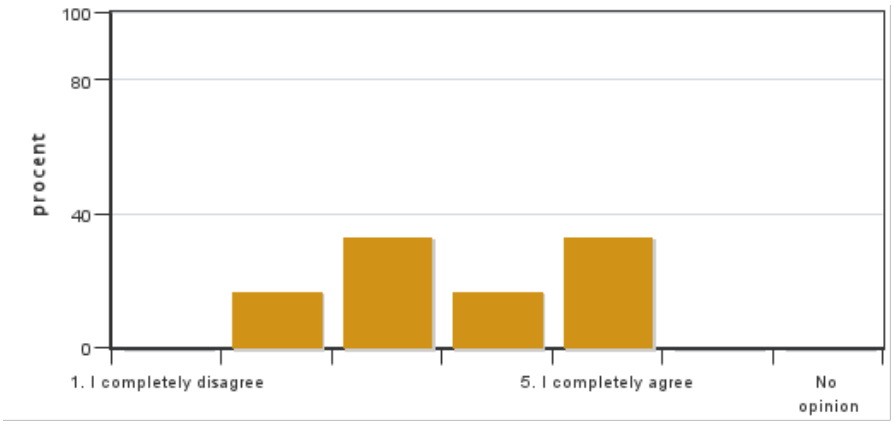


Answers: 6
Medel: 4,5
Median: 4

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

No opinion: 0

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

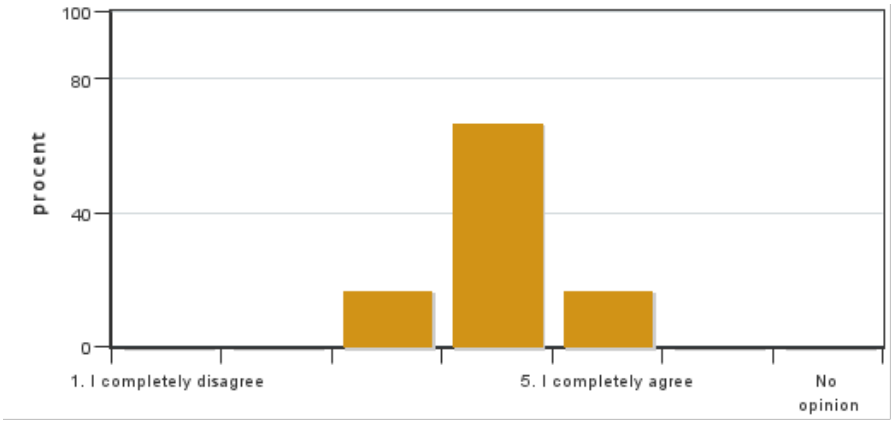


Answers: 6
Medel: 3,7
Median: 3

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

No opinion: 0

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

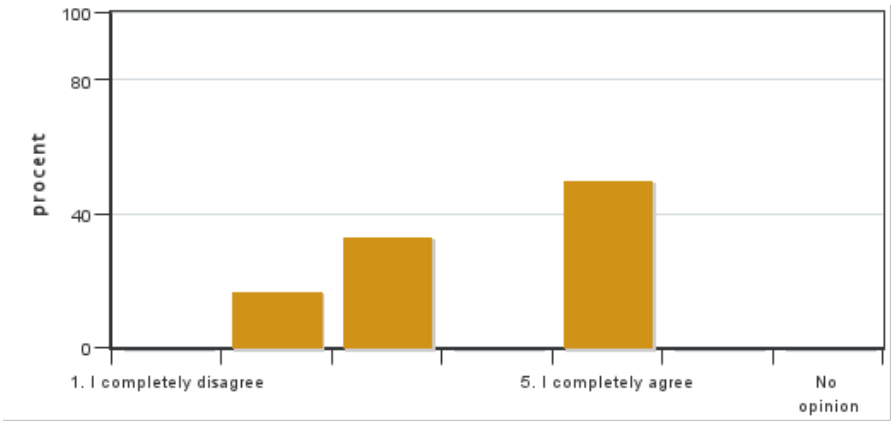


Answers: 6
Medel: 4,0
Median: 4

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

No opinion: 0

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

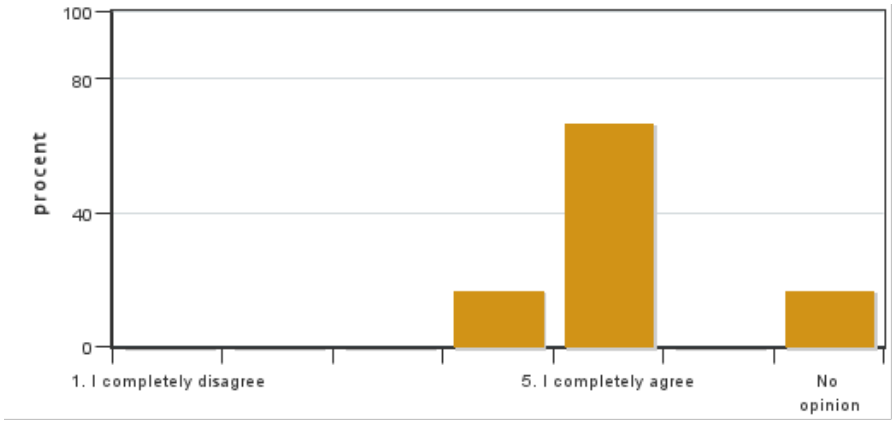


Answers: 6
Medel: 3,8
Median: 3

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

No opinion: 0

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).

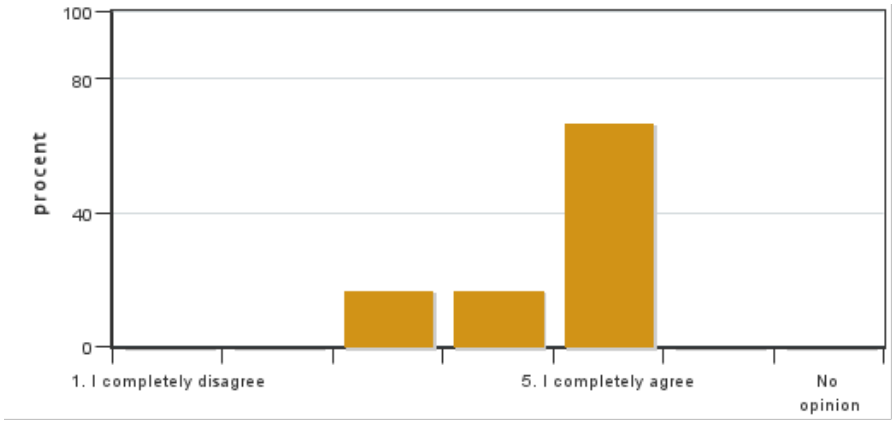


Answers: 6
Medel: 4,8
Median: 5

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

No opinion: 1

11. The course covered international perspectives.

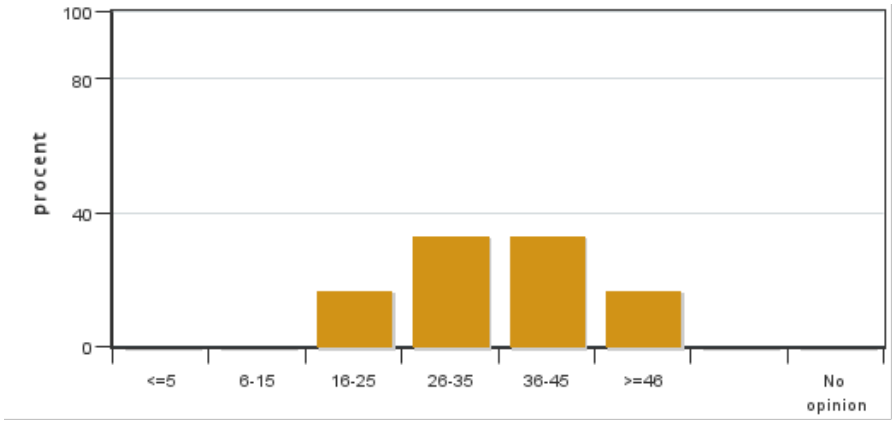


Answers: 6
Medel: 4,5
Median: 5

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

No opinion: 0

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



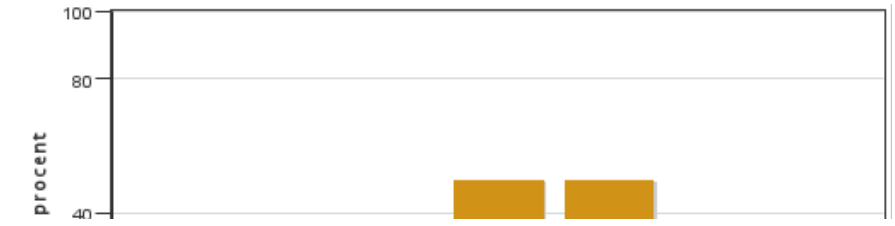
Answers: 6
Medel: 34,3
Median: 26-35

≤5: 0
6-15: 0
16-25: 1
26-35: 2
36-45: 2
≥46: 1

No opinion: 0

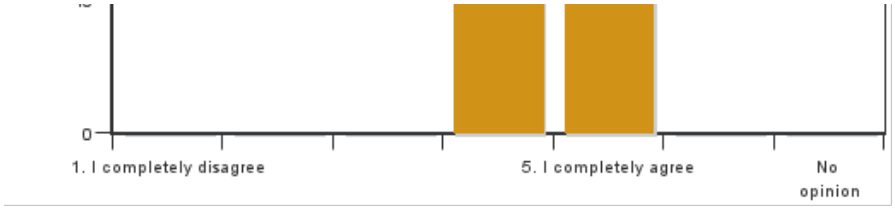
Additional own questions

13. The lecturers were available and supportive throughout the course



Answers: 6
Medel: 4,5
Median: 4

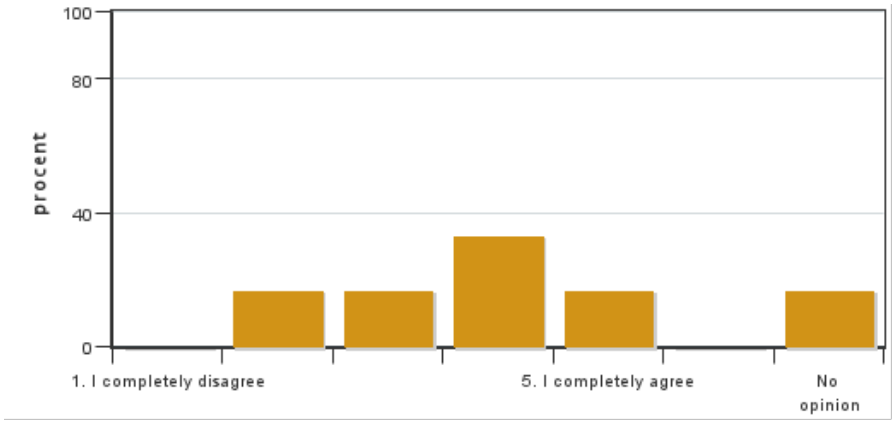
1: 0
2: 0
3: 0



4: 3
5: 3

No opinion: 0

14. The support and tutorship for the project work (incl. mini-documentaries) was sufficient



Answers: 6
Medel: 3,6
Median: 4

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

No opinion: 1

15. Which aspect(s)/part(s) of the course did you like the most?

15. Which aspect(s)/part(s) of the course did you like the least?

15. If you think the course, or parts of it, would benefit from certain modifications, could you please provide suggestions on how to improve the course?

15. Which suggestions would you provide to next year's students on how to get the best out of this course?

Course leaders comments

The course evaluation appears representative, as all students that participated in the course also did the evaluation. Five out of six students were satisfied or very satisfied with the course, which I consider a good result, especially when keeping in mind that this course was completely new developed (from scratch) and given for the first time. One of the participating students unfortunately gave the clear impression of being poorly motivated for parts of the course, perhaps because this course was not their first choice; which is reflected by the evaluation results and also significantly influenced the team (projects) work (some of the students' comments, e.g. on the team work, also might reflect aspects of this issue).

Some students were critical regarding the organization of the material at Canvas and the quantity of literature to read prior to some of the seminars. Canvas has some limitations in structuring the contents, but we will try to improve the structure at Canvas next time this course is taught. Also, the quantity of literature to read will be critically reviewed and possibly reduced for the next course occasion.

Several students were unhappy with the physical learning environment, specifically the seminar room in which most of the lectures and seminars were taught. For the coming course occasion, I have already booked a different room, to improve the physical learning environment. One student criticized “lacking of experimental devices, for example the SPAD meter, and the leaf scanner” - a criticism that is a bit hard to understand, as both these items (needed for the project work) indeed were available to the students (and definitely not “lacking”). I believe that this comment refers to the fact that both items had to be shared with other researchers at the department, and there were occasional misunderstandings in communicating the shared use. We will try to improve communication next time the course is given, and also see whether a different (more rapid) leaf scanner can be made available to the students.

The written exam was a multiple choice type exam contributing 50% to the final grade, and motivated by the fact that the other half of the course (and grade) was of a very strong in-depth and reflection-type character, in the form of

two project works and reports. The comment of one student on “the inclusion of negative marks” requires explanation: I had originally indeed considered to apply negative marks, but negative marks were actually NOT applied in the scoring of the written exam! Additional oral examination was also offered to the students as some of them felt “fooled” by the fact that negative marks were first considered but later not applied. For next years' course, the written exam will be communicated more clearly and improved, based on the experience from this years' written exam.

To my surprise, some student comments indicate that they did not realize the sustainability issues that were clearly covered by this course: For example, the course part on plant nutrient use efficiency directly addressed (environmental) sustainability aspects, and also other course parts touched issues relevant for sustainable development. For next years' course, we plan to more clearly point out the sustainability aspects covered by this course.

Regarding project work, some students experienced the first course day as too stressful, and also felt that they had received too little support for the statistical analysis required in the (second) project work. Regarding statistical support, I am not sure about what motivated this comment, as statistical support was indeed offered regularly to the students throughout the entire (second) project. In the schedule for next years' course, the start of the first project work will be re-structured and the communication of the statistical support improved.

Several of the students' suggestions for course improvements will certainly be considered next time this course will be given: We will improve the data analysis and statistics part and re-think the modelling part of the course; we will try to lower the amount of reading material; and we will attempt to provide better equipment for rapid leaf scanning in the project work. One students' comment on weighting the second project work more than the first project work must have been caused by a misunderstanding, as the second project part was indeed weighted double as much compared to the first project work already in this years' course. However, the weighting scheme will be clarified in next years' course, for example by clearly stating it in the grading criteria for this course.

Student representatives comments

The students appear to receive the overall course as positive experience. The variation between theory and practical work is well balanced. The course has given the students an unique perspective on phenotyping because of the applied approach. The courses was overall very well organized. Only a few things could be improved, but given that it was a new course these little mistakes couldn't have been avoided and are corrected for next year's course. Students felt that there background knowledge was enough to keep up with the course. A basic plant biology background should be sufficient. The reading list for the course was in good correlation with the lectures and the practical work. The lectures and other material also supported the course in a positive way. Team work was also a big part of the course which teaches you in generally a lot about working in research and communicating with other in a good and efficient way.

The learning environment has been inclusive, only the lecture room appeared to be a little small and cold sometimes. The exam was a nice summary of most of the key topics of the course, only the exam style need some adaption which will be done for the 2020 course. Students spent between 16-45 hours per week, this variated a lot depending on the practical work weeks. Students enjoyed the chance to listed to guest professors and researchers providing them with the newest developments in their fields. The modelling part was one of the biggest negative points. Overall student were very satisfied with the course and appear to have learned a lot theoretically and practically and would recommend the course especially given that the teacher will adjust all the problems being it a new course.