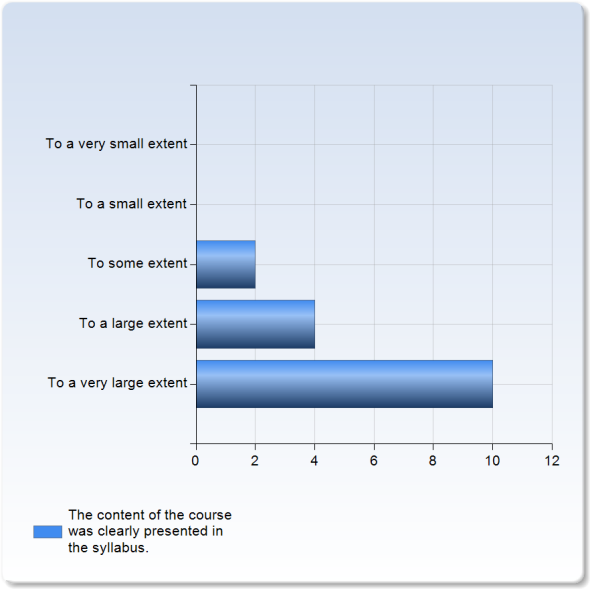
2870 Microscopy: improve your imaging skills - from sample preparation to image analysis VT19

Respondents: 16
Answer Count: 16
Answer Frequency: 100.00 %

1. The content of the course was clearly presented in the syllabus.

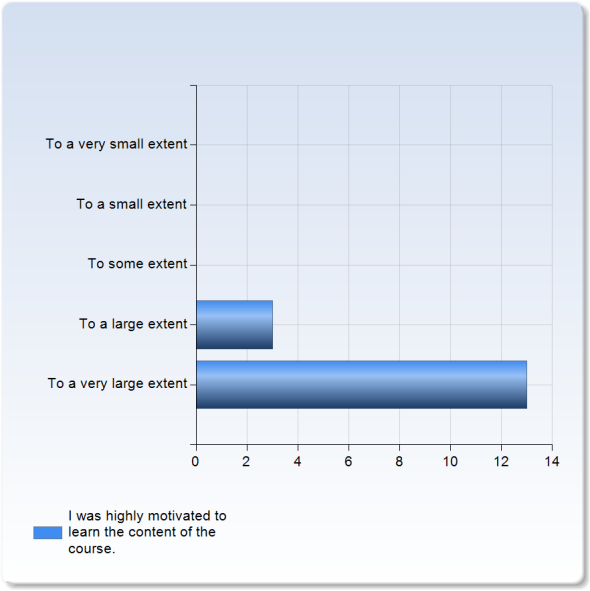
The content of the course was clearly presented in the syllabus.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	2 (12.5%)
To a large extent	4 (25.0%)
To a very large extent	10 (62.5%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The content of the course was clearly presented in the syllabus.	4.5	0.7	16.2 %	3.0	4.0	5.0	5.0	5.0

2. I was highly motivated to learn the content of the course.

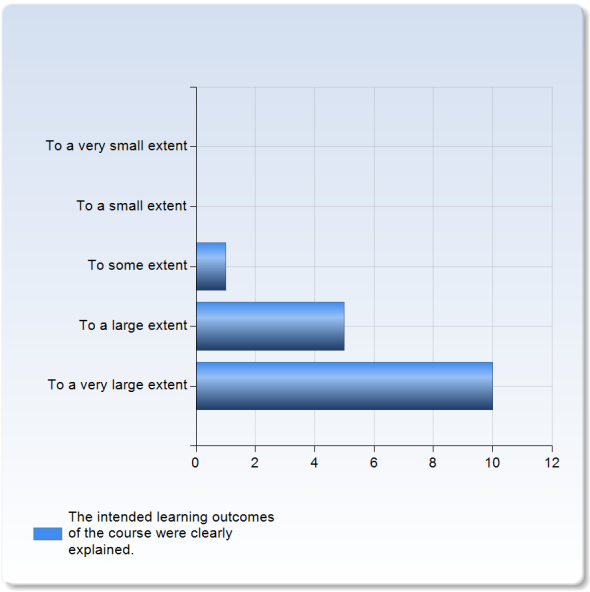
I was highly motivated to learn the content of the course.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	0 (0.0%)
To a large extent	3 (18.8%)
To a very large extent	13 (81.3%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
I was highly motivated to learn the content of the course.	4.8	0.4	8.4 %	4.0	5.0	5.0	5.0	5.0

3. The intended learning outcomes of the course were clearly explained.

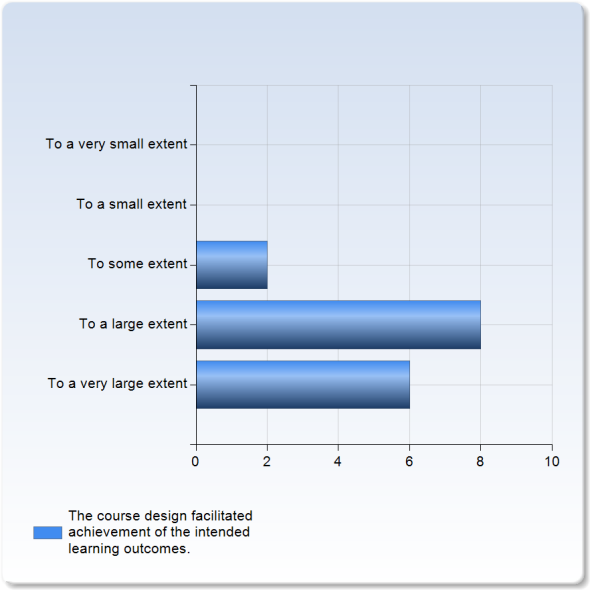
The intended learning outcomes of the course were clearly explained.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	1 (6.3%)
To a large extent	5 (31.3%)
To a very large extent	10 (62.5%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The intended learning outcomes of the course were clearly explained.	4.6	0.6	13.8 %	3.0	4.0	5.0	5.0	5.0

4. The course design facilitated achievement of the intended learning outcomes.

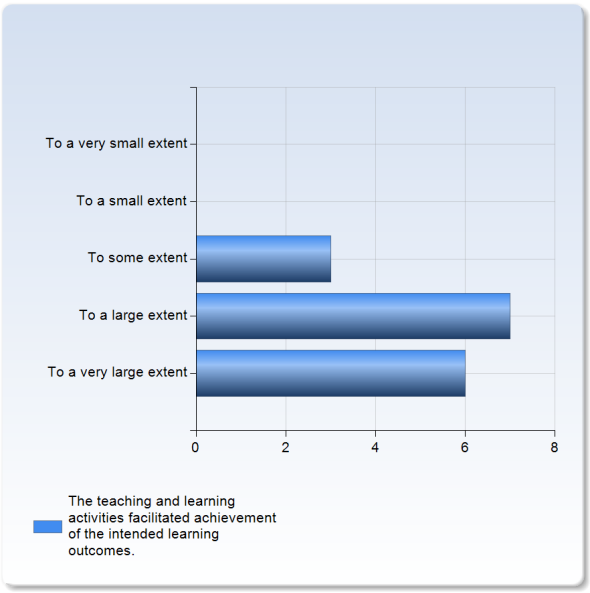
The course design facilitated achievement of the intended learning outcomes.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	2 (12.5%)
To a large extent	8 (50.0%)
To a very large extent	6 (37.5%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The course design facilitated achievement of the intended learning outcomes.	4.3	0.7	16.1 %	3.0	4.0	4.0	5.0	5.0

5. The teaching and learning activities facilitated achievement of the intended learning outcomes.

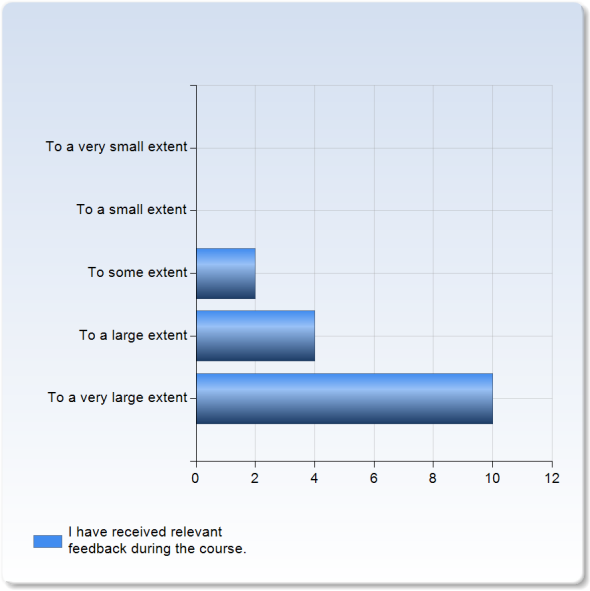
The teaching and learning activities facilitated achievement of the intended learning outcomes.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	3 (18.8%)
To a large extent	7 (43.8%)
To a very large extent	6 (37.5%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The teaching and learning activities facilitated achievement of the intended learning outcomes.	4.2	0.8	17.9 %	3.0	4.0	4.0	5.0	5.0

6. I have received relevant feedback during the course.

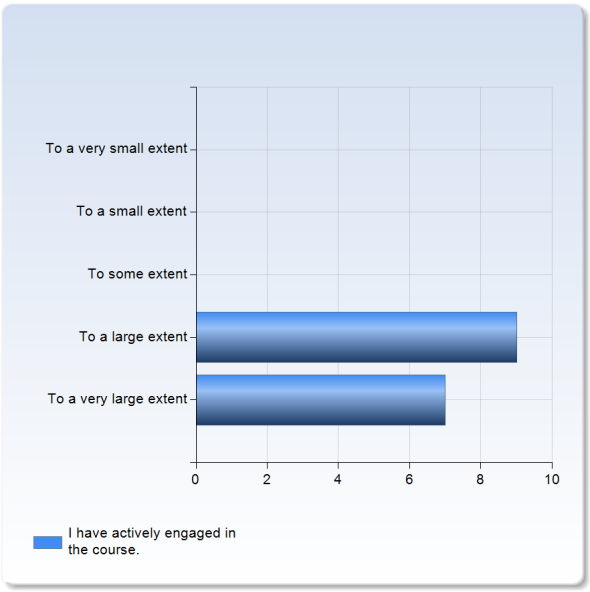
I have received relevant feedback during the course.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	2 (12.5%)
To a large extent	4 (25.0%)
To a very large extent	10 (62.5%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
I have received relevant feedback during the course.	4.5	0.7	16.2 %	3.0	4.0	5.0	5.0	5.0

7. I have actively engaged in the course.

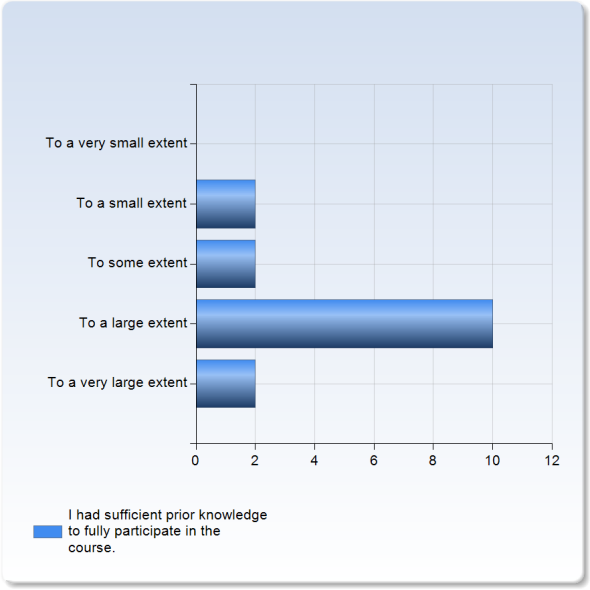
I have actively engaged in the course.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	0 (0.0%)
To a large extent	9 (56.3%)
To a very large extent	7 (43.8%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
I have actively engaged in the course.	4.4	0.5	11.5 %	4.0	4.0	4.0	5.0	5.0

8. I had sufficient prior knowledge to fully participate in the course.

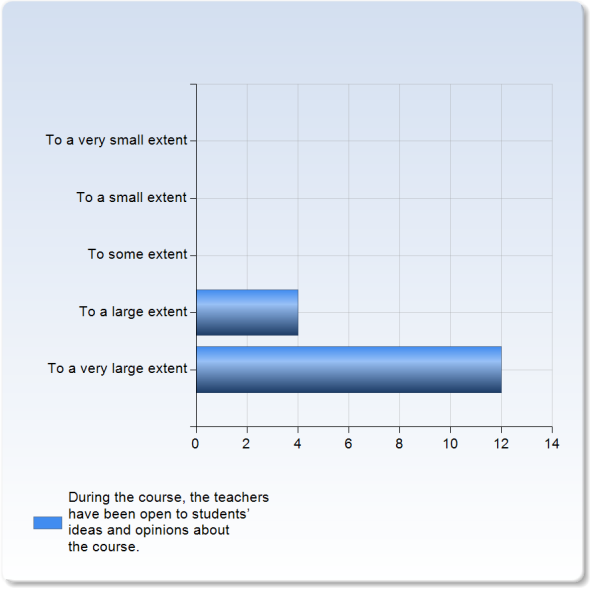
I had sufficient prior knowledge to fully participate in the course.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	2 (12.5%)
To some extent	2 (12.5%)
To a large extent	10 (62.5%)
To a very large extent	2 (12.5%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
I had sufficient prior knowledge to fully participate in the course.	3.8	0.9	22.8 %	2.0	3.5	4.0	4.0	5.0

9. During the course, the teachers have been open to students' ideas and opinions about the course.

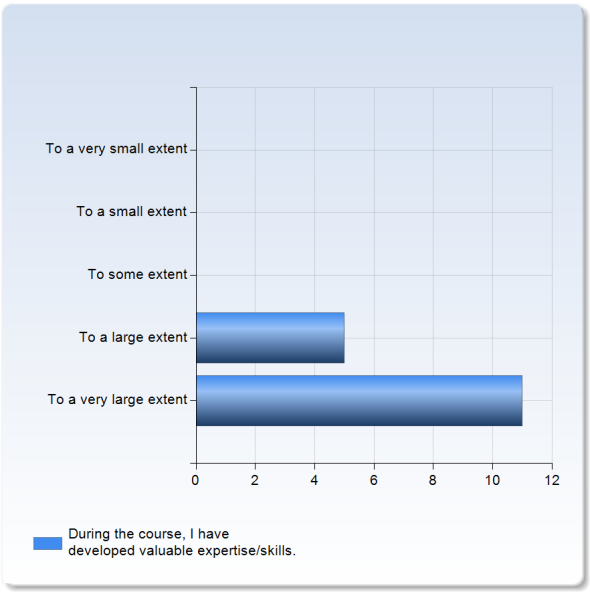
During the course, the teachers have been open to students' ideas and opinions about the course.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	0 (0.0%)
To a large extent	4 (25.0%)
To a very large extent	12 (75.0%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
During the course, the teachers have been open to students' ideas and opinions about the course.	4.8	0.4	9.4 %	4.0	4.5	5.0	5.0	5.0

10. During the course, I have developed valuable expertise/skills.

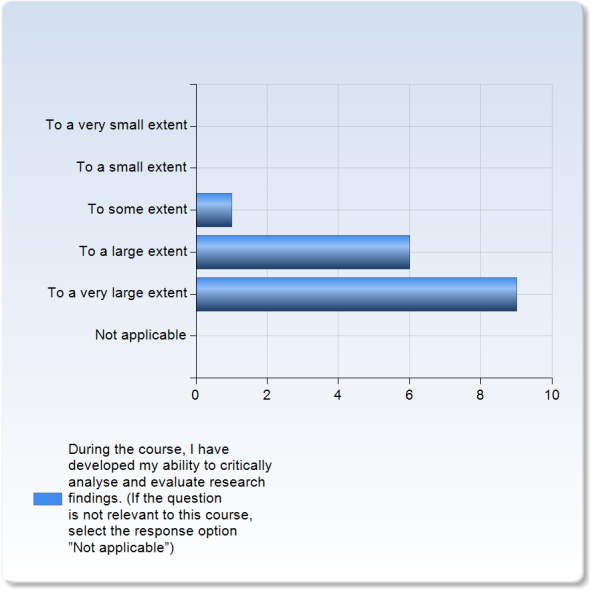
During the course, I have developed valuable expertise/skills.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	0 (0.0%)
To a large extent	5 (31.3%)
To a very large extent	11 (68.8%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
During the course, I have developed valuable expertise /skills.	4.7	0.5	10.2 %	4.0	4.0	5.0	5.0	5.0

11. During the course, I have developed my ability to critically analyse and evaluate research findings. *(If the question is not relevant to this course, select the response option "Not applicable")*

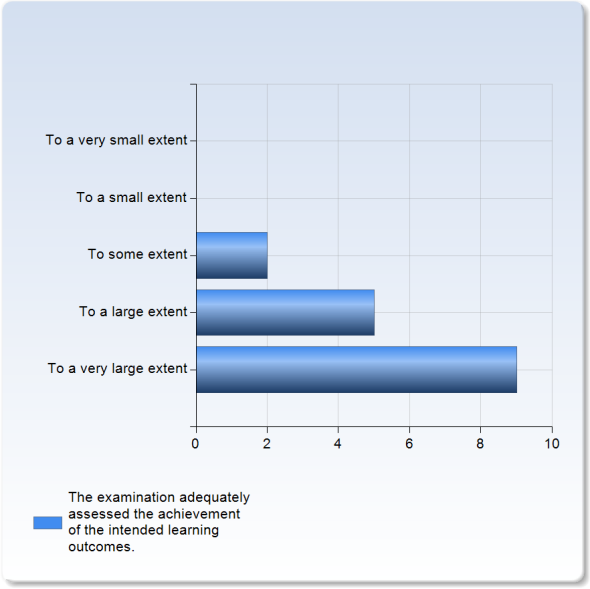
During the course, I have developed my ability to critically analyse and evaluate research findings. *(If the question is not relevant to this course, select the response option "Not applicable")*	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	1 (6.3%)
To a large extent	6 (37.5%)
To a very large extent	9 (56.3%)
Not applicable	0 (0.0%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
During the course, I have developed my ability to critically analyse and evaluate research findings. *(If the question is not relevant to this course, select the response option "Not applicable")*	4.5	0.6	14.1 %	3.0	4.0	5.0	5.0	5.0

12. The examination adequately assessed the achievement of the intended learning outcomes.

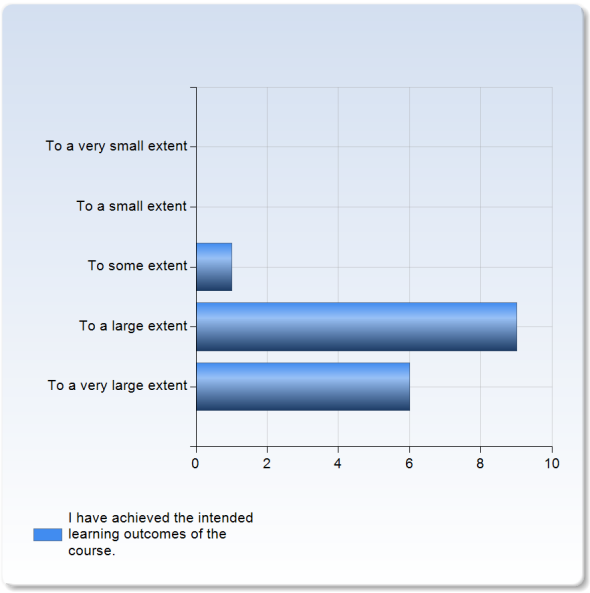
The examination adequately assessed the achievement of the intended learning outcomes.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	2 (12.5%)
To a large extent	5 (31.3%)
To a very large extent	9 (56.3%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The examination adequately assessed the achievement of the intended learning outcomes.	4.4	0.7	16.4 %	3.0	4.0	5.0	5.0	5.0

13. I have achieved the intended learning outcomes of the course.

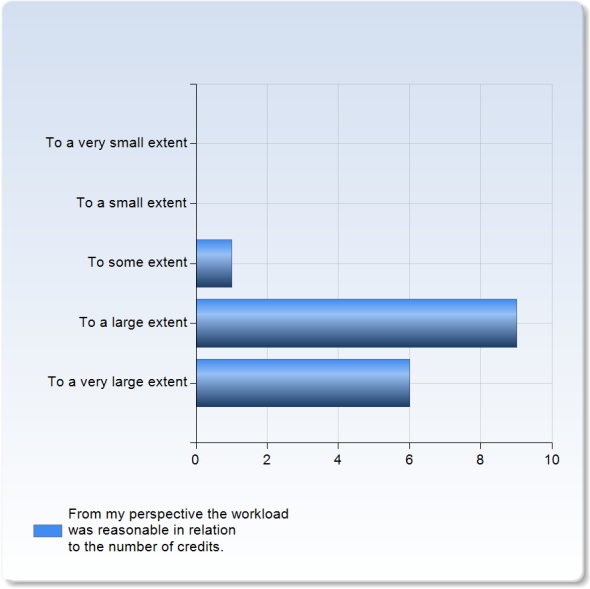
I have achieved the intended learning outcomes of the course.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	1 (6.3%)
To a large extent	9 (56.3%)
To a very large extent	6 (37.5%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
I have achieved the intended learning outcomes of the course.	4.3	0.6	14.0 %	3.0	4.0	4.0	5.0	5.0

14. From my perspective the workload was reasonable in relation to the number of credits.

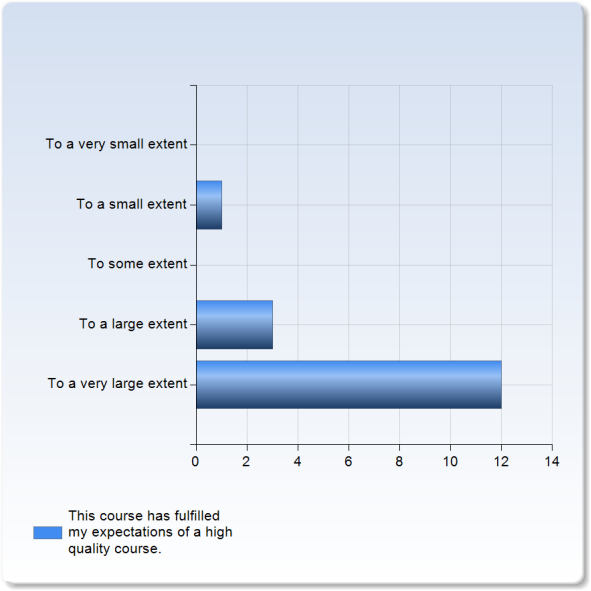
From my perspective the workload was reasonable in relation to the number of credits.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	0 (0.0%)
To some extent	1 (6.3%)
To a large extent	9 (56.3%)
To a very large extent	6 (37.5%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
From my perspective the workload was reasonable in relation to the number of credits.	4.3	0.6	14.0 %	3.0	4.0	4.0	5.0	5.0

15. This course has fulfilled my expectations of a high quality course.

This course has fulfilled my expectations of a high quality course.	Number of Responses
To a very small extent	0 (0.0%)
To a small extent	1 (6.3%)
To some extent	0 (0.0%)
To a large extent	3 (18.8%)
To a very large extent	12 (75.0%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
This course has fulfilled my expectations of a high quality course.	4.6	0.8	17.4 %	2.0	4.5	5.0	5.0	5.0

16. Were there any parts of the course that were excellent? If so, please specify which parts and in what way.

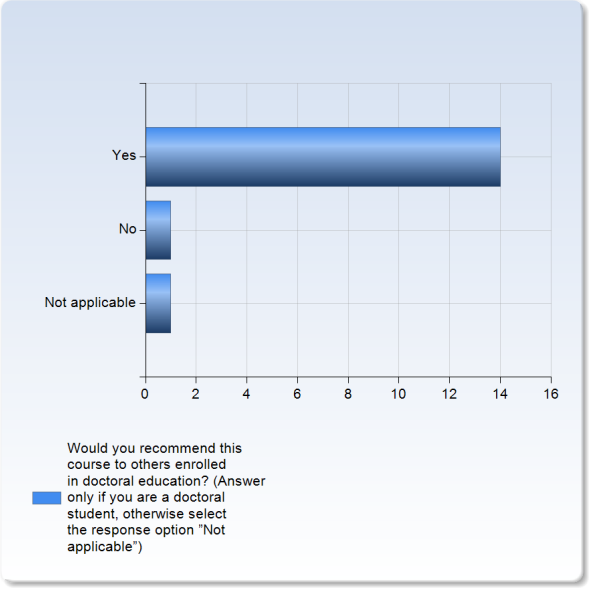
Were there any parts of the course that were excellent? If so, please specify which parts and in what way.
Sylvie is excellent as a teacher and highly knowledgeable, and I couldn't imagine a better person teaching this course!
Most of the lectures were excellent. The student imaging challenge and the hand-on training with our samples were excellent.
The course was exceptionally good, I learned many useful tricks to improve the quality of my samples preparation and imaging. All Sylvie lectures were very useful and good, with a nice balance between basic and advance concept, theory and practice. The individually student imaging challenges as well as some of the workshops (the one with Gabrielle and Sylvie particularly), wrapping up meeting and discussion, were very useful and important to understand common imaging problem and to fix in the mind the concepts of the lectures.Anatomy of the microscope very useful as well as the week assignments. The exam well organized to really summarize all the notions acquired during the weeks.
I have to say that this is the best PhD course I have taken, I learned so much valuable skills that will be extremely helpful in my own project. The best part of the course was the fact that I got to learn microscopy based on my own microscope with my own sample in mind, in this way I know feel so much more comfortable with performing my microscopy for my PhD project. I understand how my microscope work and I now know how to image and prepare my samples to get the most out of my experiment and answer my scientific question in the best way possible!
I thought that the course was excellent overall. The range of guest speakers was fantastic, and if any of them brought the lecture to a depth beyond our knowledge, the course coordinator slowed it down and explained things carefully. I rarely, if ever, felt lost during the lectures. I also liked the range of topics discussed. Since we all come from a variety of microscopy backgrounds I feel that adequate time was spent on a range of microscopy techniques. In addition, I liked that there was a focus on the sample prep as well as the "pure" microscopy.
The entire approach to the course, starting from very basic concepts to very difficult ones, explained in a clear way. Excellent that this course consists of both theoretical and practical lectures/workshops.
For the first time I attended a course that wasn't just teaching but also applying what we ave learned to our personal research project and discuss our scientific questions with colleagues. Was really an high quality course.

17. Do you have any recommendations as to how the course could be improved? If so, please specify which parts and how.

Do you have any recommendations as to how the course could be improved? If so, please specify which parts and how.
Some of the online lectures might have to be improved a little bit. Hard to follow them sometimes!
The lectures given by two external speakers online (Jason &Marc) were very technical and difficult to follow as well as not useful. The feedback provided after students presentations is very useful, and it will great to broadcast it online during next years.
Some lectures from the external speakers were too much detailed without a proper focus on the biological aspects. Some workshops, especially the ones of Tobias, were useful from one side, but a little bit confusing to the other.
Organization of Workshops It was very unclear throughout the whole course when which workshop would happen and what material needed to be studied and when. Very often people prepared for the wrong workshop or were 1 week to early. This created a lot of extra work and frustration due to the confusion. Lectures: All the lectures given by external presenters could have been skiped because they were held in a very bad and boring way! Especially the presenter from Human Protein Atlas was very irrelevant since she basically showed pictures of stainings that worked and when asked specific questions about tissue fixation or Antobidy stainings, she did not know! Some lectures were held via skype and it was very difficult to understand the speaker and follow the presentation. If speakers can`t attend the course, better skip the presentation because at some point people just stoped listening! The audience constisted of 99% biologists who are not interested in the mathematical formula behind algorithms etc, however external speakers did not adjust their presentation to their audience and were therefore not helpful as well! Course lenght and Workshops: The amount of different micsocopes and workshops were just confusing. Although it sounded great to see techniques like STORM or see a lightsheet microscope, in the end the students were sitting next to the operator and in case of the lightsheet looking at yet another power point presentation. I don`t see the point of bookinng a whole hour workshop time for this. Instead - Reduce the lectures to the essentials and let the students choose 1-3 systems they want to work on. With this set up, ZEISS people can have more workshops for the ZEISS microscope (e.g. how to do a Z-stack, how to use the spectral detectors etc) and the same for people using spinning disk. Much more efficient and students will learn a lot more.
I think an improvement that could be made is a brief lecture (10min) about the workshop prior to the afternoon workshop sessions. While I enjoyed the practical elements of the course it would have been nice to have a bit of background before (especially since some were very technical)
Some workshops could be replaced with more hands-on workshops.However, this might be difficult to achieve with many students.

18. Would you recommend this course to others enrolled in doctoral education? *(Answer only if you are a doctoral student, otherwise select the response option "Not applicable")*

Would you recommend this course to others enrolled in doctoral education? *(Answer only if you are a doctoral student, otherwise select the response option "Not applicable")*	Number of Responses
Yes	14 (87.5%)
No	1 (6.3%)
Not applicable	1 (6.3%)
Total	16 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
Would you recommend this course to others enrolled in doctoral education? *(Answer only if you are a doctoral student, otherwise select the response option "Not applicable")*	1.1	0.3	24.2 %	1.0	1.0	1.0	1.0	2.0