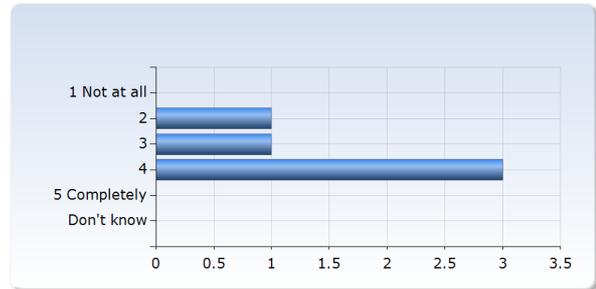


FK5028 - Radiation Sources with Medical Applications

Respondents: 14
Answer Count: 5
Answer Frequency: 35.71 %

5. Overall impression

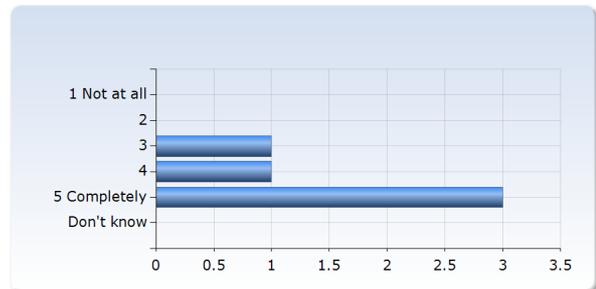
Overall I am satisfied with this course	Number of Responses
1 Not at all	0 (0.0%)
2	1 (20.0%)
3	1 (20.0%)
4	3 (60.0%)
5 Completely	0 (0.0%)
Don't know	0 (0.0%)
Total	5 (100.0%)



6. Student contribution

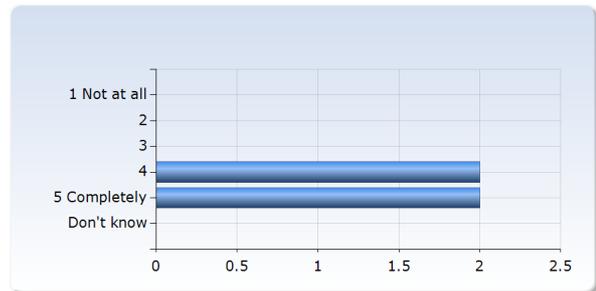
I am satisfied with my own effort in the course

I am satisfied with my own effort in the course	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	1 (20.0%)
4	1 (20.0%)
5 Completely	3 (60.0%)
Don't know	0 (0.0%)
Total	5 (100.0%)



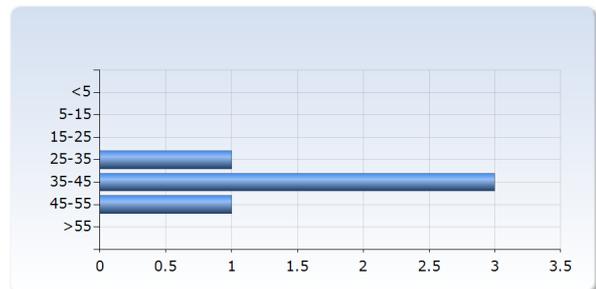
I took responsibility for my own learning in the course

I took responsibility for my own learning in the course	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	2 (50.0%)
5 Completely	2 (50.0%)
Don't know	0 (0.0%)
Total	4 (100.0%)



7. Work load

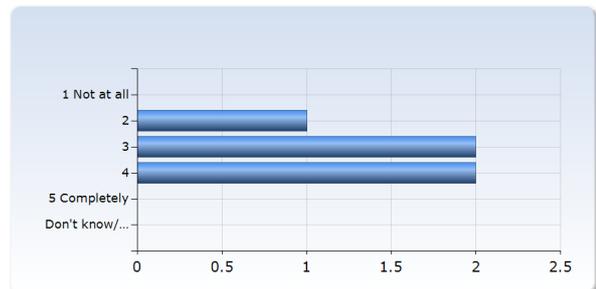
Indicate how many hours per week on average you have spent on the course, including self-studies and scheduled study time	Number of Responses
<5	0 (0.0%)
5-15	0 (0.0%)
15-25	0 (0.0%)
25-35	1 (20.0%)
35-45	3 (60.0%)
45-55	1 (20.0%)
>55	0 (0.0%)
Total	5 (100.0%)



8. Clear aims

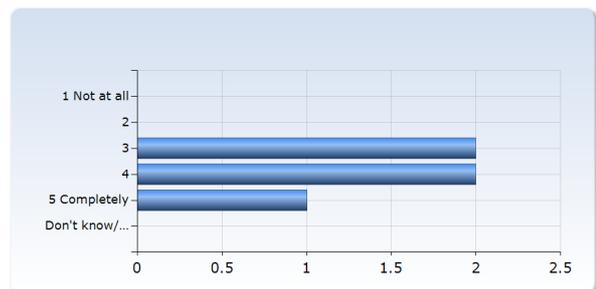
It was clear to me what I was expected to learn

It was clear to me what I was expected to learn	Number of Responses
1 Not at all	0 (0.0%)
2	1 (20.0%)
3	2 (40.0%)
4	2 (40.0%)
5 Completely	0 (0.0%)
Don't know/ Not relevant	0 (0.0%)
Total	5 (100.0%)



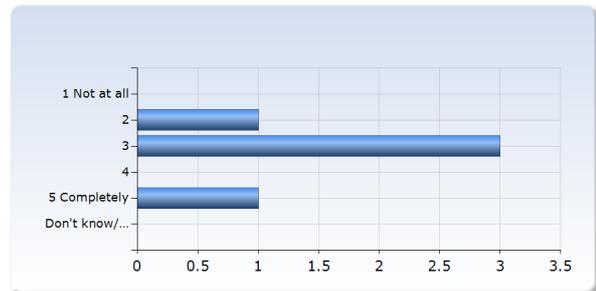
I felt that the course content and teaching methods were relevant to the learning outcomes

I felt that the course content and teaching methods were relevant to the learning outcomes	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	2 (40.0%)
4	2 (40.0%)
5 Completely	1 (20.0%)
Don't know/ Not relevant	0 (0.0%)
Total	5 (100.0%)



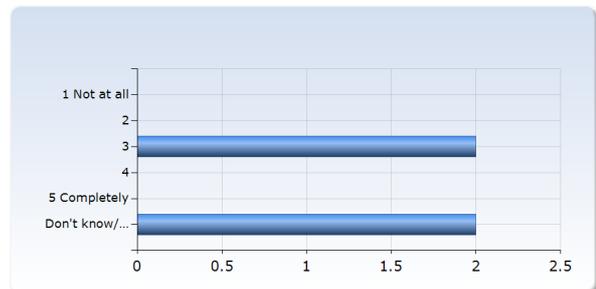
The examination tested how well I had achieved the learning outcomes

The examination tested how well I had achieved the learning outcomes	Number of Responses
1 Not at all	0 (0.0%)
2	1 (20.0%)
3	3 (60.0%)
4	0 (0.0%)
5 Completely	1 (20.0%)
Don't know/ Not relevant	0 (0.0%)
Total	5 (100.0%)



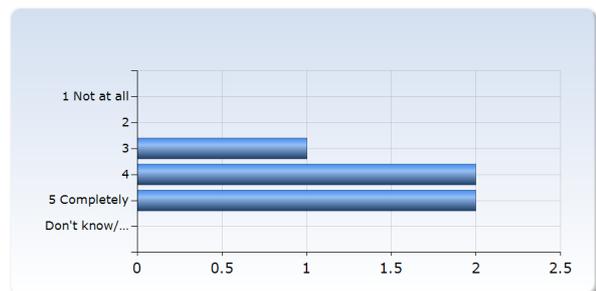
The course corresponded to my expectations

The course corresponded to my expectations	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	2 (50.0%)
4	0 (0.0%)
5 Completely	0 (0.0%)
Don't know/ Not relevant	2 (50.0%)
Total	4 (100.0%)



I feel that I will have use of what I have learnt after my studies

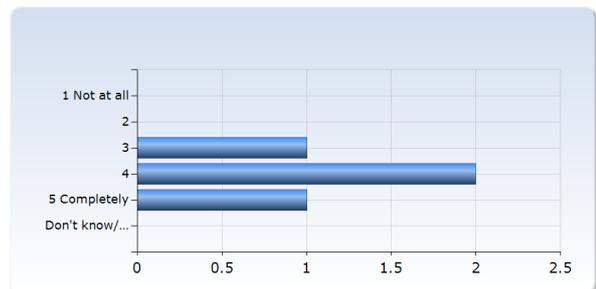
I feel that I will have use of what I have learnt after my studies	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	1 (20.0%)
4	2 (40.0%)
5 Completely	2 (40.0%)
Don't know/ Not relevant	0 (0.0%)
Total	5 (100.0%)



9. Good teaching

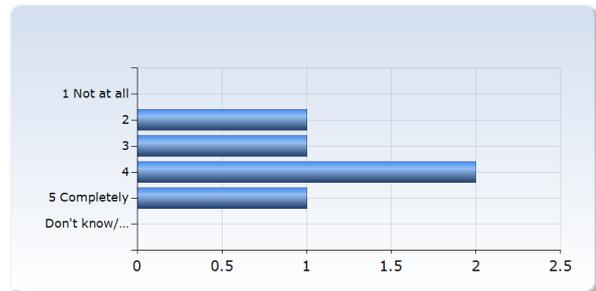
The course prerequisites were sufficient to follow the course

The course prerequisites were sufficient to follow the course	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	1 (25.0%)
4	2 (50.0%)
5 Completely	1 (25.0%)
Don't know/ Not relevant	0 (0.0%)
Total	4 (100.0%)



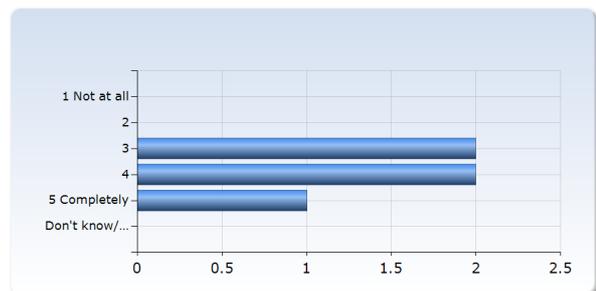
I felt that the course was well structured

I felt that the course was well structured	Number of Responses
1 Not at all	0 (0.0%)
2	1 (20.0%)
3	1 (20.0%)
4	2 (40.0%)
5 Completely	1 (20.0%)
Don't know/ Not relevant	0 (0.0%)
Total	5 (100.0%)



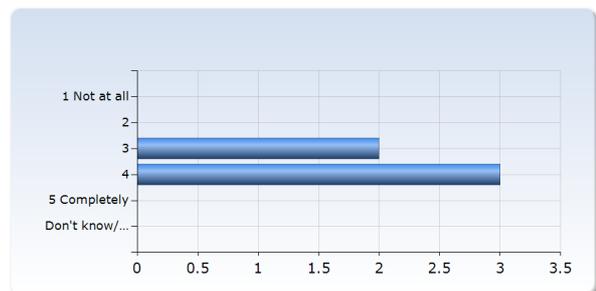
I felt that the teachers have helped me to reach the learning outcomes

I felt that the teachers have helped me to reach the learning outcomes	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	2 (40.0%)
4	2 (40.0%)
5 Completely	1 (20.0%)
Don't know/ Not relevant	0 (0.0%)
Total	5 (100.0%)



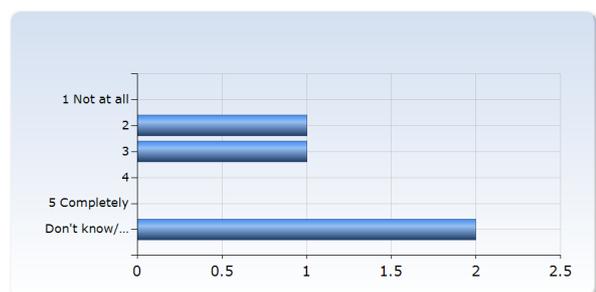
I could understand what was being taught

I could understand what was being taught	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	2 (40.0%)
4	3 (60.0%)
5 Completely	0 (0.0%)
Don't know/ Not relevant	0 (0.0%)
Total	5 (100.0%)



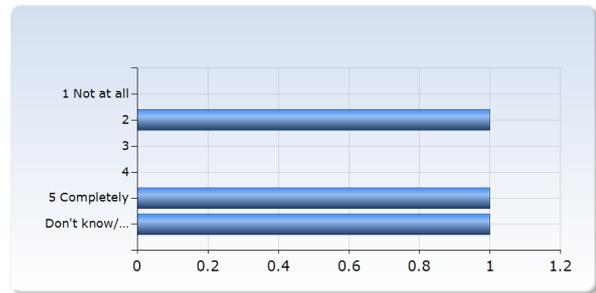
I have received constructive feedback on my performance

I have received constructive feedback on my performance	Number of Responses
1 Not at all	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	0 (0.0%)
5 Completely	0 (0.0%)
Don't know/ Not relevant	2 (50.0%)
Total	4 (100.0%)



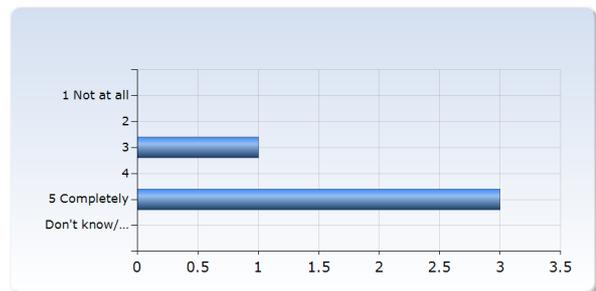
I was encouraged to reflect on my learning during the course

I was encouraged to reflect on my learning during the course	Number of Responses
1 Not at all	0 (0.0%)
2	1 (33.3%)
3	0 (0.0%)
4	0 (0.0%)
5 Completely	1 (33.3%)
Don't know/ Not relevant	1 (33.3%)
Total	3 (100.0%)



The course material helped me in my work to achieve the learning outcomes (literature, e-resources etc.)

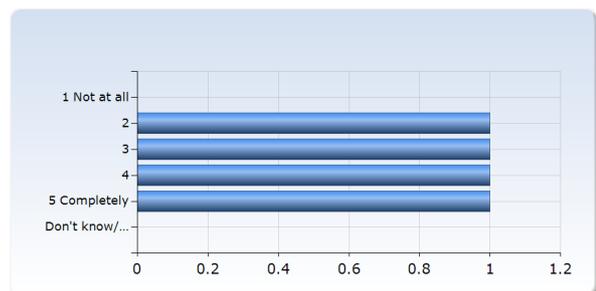
The course material helped me in my work to achieve the learning outcomes (literature, e-resources etc.)	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	1 (25.0%)
4	0 (0.0%)
5 Completely	3 (75.0%)
Don't know/ Not relevant	0 (0.0%)
Total	4 (100.0%)



10. Administration and study environment

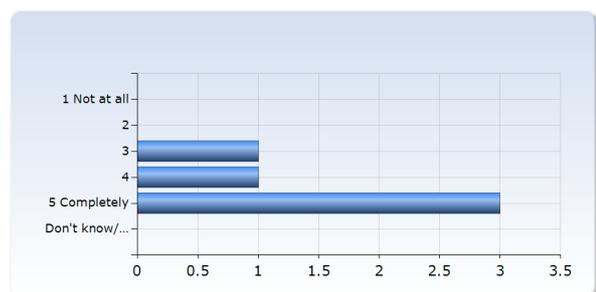
I felt that the course was well organized

I felt that the course was well organized	Number of Responses
1 Not at all	0 (0.0%)
2	1 (25.0%)
3	1 (25.0%)
4	1 (25.0%)
5 Completely	1 (25.0%)
Don't know/ Not relevant	0 (0.0%)
Total	4 (100.0%)



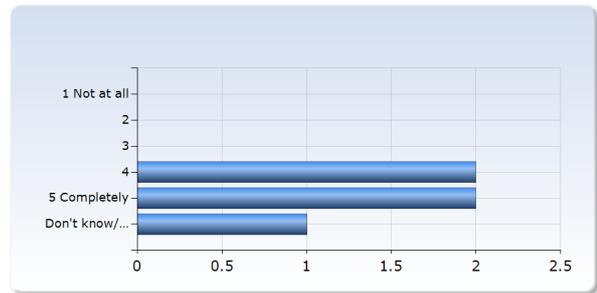
I have been able to find the information I felt I needed before and during the course

I have been able to find the information I felt I needed before and during the course	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	1 (20.0%)
4	1 (20.0%)
5 Completely	3 (60.0%)
Don't know/ Not relevant	0 (0.0%)
Total	5 (100.0%)



I was able to get support when I needed it

I was able to get support when I needed it	Number of Responses
1 Not at all	0 (0.0%)
2	0 (0.0%)
3	0 (0.0%)
4	2 (40.0%)
5 Completely	2 (40.0%)
Don't know/ Not relevant	1 (20.0%)
Total	5 (100.0%)



Comments and reflections on the course evaluation “Radiation Sources with Medical Applications” 7.5 hp, FK5028, HT2017.

1. Structure of the course in brief:

The radiation source course is divided in two parts. As described in the syllabus of the course and presented in class on the first day of the course, part 1 corresponds to 3 hp and covers the following topics: introduction to radiation physics (classification of radiation, quantities, units, radiation field, basic radiation interaction processes, dosimetric principles); principles for particle accelerators (electron-, proton- and ion accelerators), nuclear reactions, fission and fusion processes. In part 2 (3 hp), the fundamental processes in nuclear physics that result in radioactive decay, equations for radioactive decay, radioactive decay series decay, alpha- and beta decay, gamma de-excitation, internal conversion electrons; interpretation of radioactive decay scheme; production of radioactive nuclei were presented. Lectures on the course are not compulsory but recommended and the importance of attending them is stressed to the students.

Two compulsory moments of the course (1.5 hp) are the laboratory exercise (radionuclide studies) and the presentation of the project on “Important events in the history of radiation physics”.

The theory lectures were about 30 hours. Extensive exercises sessions in group with the supervision of the teacher were done for a total of about 15.5 hours.

A pre-exam covering the exercises of Part 2 was held on the middle of the course (4 bonus points to be added to the final score of the exam were given for correct answers to the numerical exercises).

Two occasions for discussion of theory and/or exercises were held (3 hours each) with the students and teacher(s).

The exam (similarly to the previous year 2016) was divided in Part 1 and Part 2 each part covering 20 points.

2. About the exam (5 hours)

Part1 of the exam was a mixture of theory questions and short exercises. Part 2 was composed of fewer theory questions and two more extensive exercises.

Questions on the exam were targeted to cover the whole program of the course and covered topics presented both in class (and found in the handouts) and in the two main books of reference for the course. At least one question for each topic of the course was given in the exam, so to test the student knowledge in every topic.

As compared to the previous year 2016, more questions were given on part 1 to better balance the weight of the two parts of the exam.

Some of the students commented on the too extensive length of the exam. However, many of the questions of the exam could have been answered in few bullet points and were merely testing the knowledge of basic concepts and definitions. It is important for the students to also learn that an extensive text would not imply a better answer to a question of the exam and concise writing of essential and targeted information should be learned. In this respect, this last piece of information will be even more stressed in the next session of the course and homeworks apt to train the capability of the students to communicate their knowledge in an effective way will be given next year.

3. About the suggested improvements of the course

Short exercises apt to immediately train the comprehension of the theory after each theoretical lecture will be introduced in a more extensive way. In this way, lectures will be also more diluted in time and more time will be given to the students to metabolize the acquired information. These short exercises could be discussed at the white board together with the students to promptly check if some parts of the lecture were not clear and to stimulate the discussion.

Being the first course in the medical radiation physics program, one of the aims of this course is to serve as a base for the following courses so that deeper knowledge can be built on top of it. Unavoidably, a very deep understanding of some of the presented topics cannot be reached since it will be covered in the next courses and a relatively large amount of topics should be presented. The red thread linking the different lectures will be even more emphasized next year and more stress will be given to make it clear the importance of each of the presented topics in the work of a medical physicist. This will be in particular done in connection with the accelerator part of the course.

The topics listed by the students as less clear during the course will be carefully checked and lectures revised to improve them and make their comprehension easier for the next year's students.

Calculators will be given to the students for practicing from the first day in class so that they will be familiar with their use on the day of the exam.

4. About the presentation of events in the history of radiation physics

The purpose of this task is to make the students practice their presentation skills. This is just the first step of a process that will continue also in the next courses. The whole process has the final aim of making them more aware of the importance of communicating science and of making them feel more comfortable in presenting in front of an audience in preparation for their Bachelor/Master thesis presentation.

Intentionally, topics assigned for the presentations were related to the history of medical radiation physics. Learning about the challenges faced by scientists in the past, understanding how their discoveries shaped today's world, knowing how and when the foundations of medical physics were laid, as well as understanding that scientific knowledge is a cumulative endeavour it is important in order to have a comprehensive view of the field of medical physics.

5. About the lab

It was an unfortunate event that there were problems with some parts of the equipment for the laboratory session. This will be more strictly checked next year in advance so to prevent any possible problem.

The lab in the course has to necessarily come after all the required theory for its full understanding is presented and it cannot come much earlier during the course, as suggested by one of the students in the survey. Indeed, the submission of the lab report before the exam is not required and students have 3 week time for submitting the first version of their report.