Evaluation of the PhD course: Responsible Conduct of Research at the Graduate School of Health and Medical Sciences

Report 11
August 2017 – June 2018

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1. Introduction

This is the eleventh report summarising the evaluation of the Graduate School’s Responsible Conduct of Research (RCR) course for newly enrolled PhD students. The report presents and analyses results generated from the evaluations of the RCR course conducted between August 2017 and June 2018. The report concludes with a brief summary. All evaluation reports on the PhD Programme are published on the Graduate School’s website.¹

The objective of the RCR course is to introduce new PhD students to the principles of Responsible Conduct of Research² and to provide information on administrative and practical matters relevant to their studies. The course is mandatory for all PhD students at the Faculty of Health and Medical Sciences. The course material is provided in advance. The course is held monthly, normally with the exception of July. The course lasts one full day. After attending the course, the PhD students sit an exam on the principles of Responsible Conduct of Research. PhD students are required to attend the course within the first six months of their PhD studies and must pass the exam as part of their programme. The course is conducted by a group of lecturers. Thus, the various modules are not conducted by the same lecturer on every course.

The report highlights general trends drawn from the evaluation of the course with the objective of providing the Graduate School and the PhD Study Board with an overall assessment of the course elements: those that are working well and those that would benefit from further development. The aim of the report is not to provide the course organiser and lecturers with detailed feedback on the individual elements of the course. After each course, the group of lecturers involved in the course receives such feedback, i.e. the quantitative and qualitative results from the course evaluation, based on the participants’ responses to the individual evaluations, which facilitates continuous follow-up.

1.1 Evaluation method

The evaluation of the RCR course is based on a survey. The survey is designed by Education and Student Services, which is responsible for the implementation of all evaluations at the Faculty of Health and Medical Sciences and which also prepared this report.³ The survey questions are formulated in cooperation with the Graduate School. Education and Student Services distributes the survey to course participants and analyses the results, whereas the Graduate School is responsible for any ongoing follow-up.

At the end of the course, participants receive an e-mail with a link to the survey. Follow-up e-mails are sent to non-respondents, encouraging them to participate. The survey consists of closed-ended questions assessed on an ascending five-step Likert scale. Respondents are invited to detail their answers by pointing out what they felt worked well and by making suggestions for changes that may help improve the course in the future. The PhD students’ assessment of the exam does not form part of this evaluation.

¹ In pursuance of Section 16b, Subsection 6 of the Danish University Act, evaluations and follow-up plans must be published. The Graduate School’s evaluations are available to download here: http://healthsciences.ku.dk/phd/about-the-graduate-school/evaluation/
² See the course description: https://phdcourses.ku.dk/Kursusliste.aspx
³ Along with evaluations carried out for the Graduate School, Education and Student Services supports the development of quality-assurance measures related to the Faculty’s pre-graduate study programmes. This includes continuous evaluation of courses and passing on information to the Dean’s Office, heads of study, study boards, and heads of departments concerning the follow-up on results and the development of the quality of the tuition.
This report presents the results from the most recent evaluation period (August 2017 to June 2018) along with comparisons with the two evaluations before that (Report 10, on courses held between August 2016 and June 2017, and Report 9, on courses held between August 2015 and June 2016).

1.2 Respondents and response rate

From August 2017 to June 2018, a total of 465 PhD students were registered for the RCR course at the Faculty of Health and Medical Sciences. As presented in Table 1.1 (below), since 345 PhD students answered the questionnaire, this amounts to an overall response rate of 74%. We judge the response rate of 74% to be satisfactory for this type of evaluation. The response rate is higher compared to the two last reports, for which the response rates were 71% (Report 10) and 66% (Report 9).

### Table 1.1: Distribution of response rates for courses held from August 2017 to June 2018

<table>
<thead>
<tr>
<th>Course</th>
<th>Number of possible respondents</th>
<th>Respondents in total</th>
<th>Response rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>45</td>
<td>36</td>
<td>80%</td>
</tr>
<tr>
<td>September</td>
<td>26</td>
<td>19</td>
<td>73%</td>
</tr>
<tr>
<td>October</td>
<td>45</td>
<td>32</td>
<td>71%</td>
</tr>
<tr>
<td>November 1</td>
<td>43</td>
<td>36</td>
<td>84%</td>
</tr>
<tr>
<td>November 2</td>
<td>45</td>
<td>33</td>
<td>73%</td>
</tr>
<tr>
<td>January 1</td>
<td>32</td>
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<td>72%</td>
</tr>
<tr>
<td>January 2</td>
<td>40</td>
<td>29</td>
<td>73%</td>
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<tr>
<td>February</td>
<td>27</td>
<td>20</td>
<td>74%</td>
</tr>
<tr>
<td>March</td>
<td>36</td>
<td>26</td>
<td>72%</td>
</tr>
<tr>
<td>April</td>
<td>37</td>
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<td>70%</td>
</tr>
<tr>
<td>May</td>
<td>45</td>
<td>30</td>
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</tr>
<tr>
<td>June</td>
<td>44</td>
<td>35</td>
<td>80%</td>
</tr>
<tr>
<td>Total</td>
<td>465</td>
<td>345</td>
<td>74%</td>
</tr>
</tbody>
</table>

As Table 1.1 shows, response rates range from 67% to 84% for the 12 courses held in this evaluation period. The rates are calculated using the total number of possible respondents from the lists of participants issued by the PhD Administration. Respondents who stated in their submitted questionnaire that they did not participate in the course were excluded when calculating the response rates, since they did not answer any of the evaluation questions.\(^4\)

The actual response rates may differ slightly from those recorded in the table, as there is no way of ensuring that all PhD students who did not attend the course answered the survey’s initial question on course attendance. Thus, some course ‘no-shows’ may be registered as ‘possible respondents’ if they did not open the questionnaire and indicate that they had not attended the course.

The number of respondents can vary in the figures throughout the report, as the respondents can choose not to answer a question. This is the case for the few respondents who only completed part of the questionnaire,\(^5\)

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\(^4\) Two separate RCR courses were held in November and January. For this reason, data is kept separately rather than merged.

\(^5\) When the survey is sent to the PhD student participants, respondents are initially asked whether they attended the course. If they state that they did not attend the course, this terminates the survey.
but also for the respondents who answered the questionnaire in full since, because only some of the questions were mandatory, they could choose to skip a question. The number of respondents is indicated by ‘n’ on chart labels and on each bar in bar charts.

1.3 Presentation of results

The quantitative results in this report are presented as percentages of the total number of respondents who answered each question. The primary focus of the report is to present overall trends found in the evaluations of the 12 RCR courses conducted from August 2016 to June 2017. In most cases, therefore, the assessment of each question is calculated on the basis of all answers received to that question, i.e. answers are compiled from all 12 course evaluations.

To represent the variation that can potentially be found in the respondents’ evaluations of each of the 12 courses, the report also presents specific results from these evaluations, focusing on the questions concerning the overall assessment of the courses’ objectives and the general assessment of the courses.

Qualitative data, i.e. the PhD students’ numerous elaborative comments, have been categorised and summarised to clarify and elaborate on the quantitative results. Selected comments representing the dominant themes of the qualitative comments are presented in the report.
2. Evaluation of the course modules

The RCR course consists of a series of lectures on Responsible Conduct of Research and a welcome event held by a representative from the Graduate School that gives PhD students at HEALTH an overall introduction to the Graduate School. Respondents are asked to assess the lecturers’ communication of the various RCR lecture topics and the level of difficulty of each lecture. Furthermore, respondents evaluated the outcome of the welcome event.

2.1 Evaluation of the lectures on Responsible Conduct of Research

This section focuses on the evaluation of the course on Responsible Conduct of Research. The following lectures were assessed in terms of the lecturers’ communication of the topics and the level of difficulty of the lectures:

- Module 1: Overview of the field
- Module 2: Authorship and the Vancouver Guidelines
- Module 3a: Documentation of Scientific Results, etc.
- Module 3b: Intellectual Property Rights
- Module 4: Conflicts of Interest and Commitment, etc.

Overall evaluation of the communication of the lecture topics

As shown in Figure 2.1 (see below), the respondents feel that the topics of the lectures on Responsible Conduct of Research were communicated well. All lecturers are assessed as communicating the topics well by a minimum of 43% of the respondents, on average 69% (ratings of 4 or 5, where 5 equals ‘To a high extent’). This result is seven percentage points lower than the average rating in Report 10 (76%) and resembles the average rating in Report 9 (67%).

Figure 2.1 Overall evaluation of the communication of the topic of the lectures on Responsible Conduct of Research (‘Did the lecturer communicate well?’) (n=334-333)
The lowest rating is given for the lecture on ‘Module 3b: Intellectual Property Rights’. 43% of participants give this lecture a rating of 4 or 5 (where 5 equals ‘To a high extent’). This rating is significantly lower than those of the two previous reports, with 62% and 60% of the respondents giving a rating of 4 or 5 in Report 10 and Report 9. ‘Module 3a: Research Data Management’⁶ receives the second-lowest rating, with 62% of the respondents giving a rating of 4 or 5. This result is slightly lower than in last year’s evaluation, where 66% gave a rating of 4 or 5, but higher than in Report 9, where 51% gave a rating of 4 or 5.

The two lectures that receive the most positive ratings in this report likewise received the most positive ratings in Report 10 and Report 9, namely, ‘Module 1: Overview of the Field, etc.’ and ‘Module 2: Authorship and Vancouver Guidelines’. In the present report, 80% and 84% of respondents give these lectures a rating of 4 or 5. These results resemble those of Report 9 and 10, in which 76% and 89% of respondents gave a rating of 4 or 5.

For the remaining lecture, ‘Module 4: Conflict of interest and commitment, etc.’, 75% give ratings of 4 or 5. This result is slightly lower than that of the previous report, where 80% gave ratings of 4 or 5.

For three out of the five modules, between 4% and 8% of the respondents rate the communication of the topics of the lectures on Responsible Conduct of Research as dissatisfying (ratings of 1 or 2, where 1 equals ‘Not at all’). For ‘Module 3a: Research Data Management’, 11% give ratings between 1 or 2, which resembles the results in last year’s evaluation. For ‘Module 3b: Intellectual Property Rights’, the level of dissatisfaction with the communication of the topics has increased by twelve percentage points, from 12% in Report 10 to 24% in the present report. This is a notable increase of dissatisfaction with the communication of this lecture since last year’s evaluation.

Overall evaluation of the level of difficulty of the lectures on Responsible Conduct of Research

The evaluation also targets the level of difficulty of the lectures on Responsible Conduct of Research. Figure 2.2 (below) illustrates a generally positive evaluation. Most of the respondents feel that all the lectures were at an appropriate level of difficulty – between 73% and 83%, on average 78%. These results resemble those of the two previous reports. In Report 10, between 74% and 86%, on average 79%, rated the level of difficulty as appropriate. In Report 9, the results were between 70% and 82%, on average 76%.

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⁶ The lecture was formerly titled ‘Module 3a: Documentation of Scientific Results, etc.’
Figure 2.2: Overall evaluation of the level of difficulty of the lectures on Responsible Conduct of Research (‘How do you assess the level of difficulty of the following lectures?’) (n=328-311)

For all lectures, the percentage of respondents who feel the lectures were at an appropriate level has decreased since last year’s evaluation. The largest decrease can be found in the lecture ‘Module 3b: Intellectual property rights’: a decrease of four percentage points from 74% in Report 10 to the current 70%.

2.2 Evaluation of the welcome event held by the Graduate School representative

As shown in Figure 2.3 (see below), the welcome event held by the Graduate School representative was well received. 57% of the participants rate their outcome as ‘High’ or ‘Very high’ (ratings of 4 or 5), whereas only 6% rate their outcome as ‘Non-existent’ or ‘Poor’ (ratings of 1 or 2). There has been a clear increase in the level of satisfaction compared to the results from Report 10 and Report 9. In Report 10, 49% gave ratings of 4 or 5, while in Report 9, 50% gave ratings of 4 or 5.

Figure 2.3: Evaluation of welcome by the Graduate School representative (‘How do you assess your outcome of the Graduate School representative’s welcome?’) (n=302)

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7 The question was formerly phrased: ‘How do you assess your outcome of Jørn Wulff Helge’s welcome?’
2.3 Qualitative comments on the lectures and the welcome

Comments on lectures
As in previous reports, the majority of the 63 qualitative comments from the current report regarding the lectures on Responsible Conduct of Research express critical points of view, even though these lectures generally receive a positive assessment. However, as only 63 out of the 345 respondents chose to add qualitative comments, these critical comments do not necessarily represent the views of the entire population.

Many of the comments regarding the lectures concern two particular lectures, ‘Module 3a: Research data management’ (25 comments) and ‘Module 3b: Intellectual Property Rights’ (18 comments).

In relation to module 3a, roughly half of the comments praise the lecture, while the other half complain that the lecture was 1) too general and should have been more specific and detailed; 2) not relevant, especially for PhD students who work with CPR information, since different rules of data management apply to this; and 3) should have focused more on Danish legislation. The following comments exemplify this feedback:

‘The Data Management module was excellent. It should be promoted as a course in its own right. It is very important to treat our data appropriately.’

‘I think the lecture on research data management was attempting to be too broad in covering both requirements for clinical and biological research and as a result did not go into much detail with most topics. More details would have been very helpful.’

‘Research data management was completely irrelevant to me as a medical doctor conducting clinical trials. There are strict guidelines from the Danish Data Protection Agency regarding personal data, so I have no use of someone from the university giving good advice about copying your data to an external hard drive, sharing your data publicly etc.’

‘Module 3a: More information about the Danish legal rules for data storage (Datatilsynet, personfølsomme data) would be beneficial.’

Concerning module 3b, all the comments are critical and state that the lecture 1) is not relevant for several students and does not fit in with the RCR course; 2) focuses too much on patents; and 3) could be shorter. A few students also mention that the lecturer spoke too softly and therefore it was difficult to follow the lecture. The following comments exemplify this feedback:

‘I think module 3b isn’t relevant for most of the participants, because the lecture was basically only about patents. If we ever make an invention that deserves patenting, we will inform ourselves more about it.’

‘The lecture on intellectual property rights was very disjointed and did not really convey what intellectual property rights are nor how they would be relevant for our PhD studies.’

‘Module 3b was not at all relevant to my area of research, and only two of the participants present seemed to work in areas where intellectual property rights were of concern. I don’t
think this module is relevant for the course, at least not for the majority of participants. With such a densely packed programme I think you could consider omitting it.’

Aside from the lecture-specific themes, four general themes recur in the comments regarding the lectures:

1) Students feel some lecturers were unprepared (e.g. not acquainted with their slideshow), lacking experience with the topic of their lecture, or poor communicators (8 comments).
2) Students underline the importance of keeping lectures specific and practically applicable (7 comments).
3) Students appreciate exercises that activate and involve them during the lectures, and request more of such exercises (7 comments).
4) Students feel that their backgrounds in widely different research areas make it difficult for the lectures to be relevant to all, and suggest that the course should be differentiated, or that separate versions of the modules should be created, allowing students to sign up for various modules or versions depending on the relevance to their research (7 comments).

The following comments exemplify some of these themes:

‘Unlike the other modules Module 3a was relevant, energetic and had practical everyday solutions to ethical research problems. I like the interactive part. All other modules had no practical use, too theoretical and non-helpful to actual issues in our PhDs.’

‘All the lectures were repetitions of the book. Also, it’s a pity that all students have to attend all lectures. We come from very different disciplines, so everything is not relevant to everyone. It might be possible to have some more interesting and in-depth discussions if the students could sign up for different themes.’

Comments on the welcome

30 of the 345 respondents chose to leave a comment in the free text field accompanying the assessment of the Graduate School representative’s welcome. While some students comment that the welcome is a good feature of the course (5 comments), more students find the welcome redundant, unengaging or too long (7 comments). The following comments exemplify this feedback:

‘Nice to see a representative from the board of the Graduate School.’

‘It was nice to have but not really ‘necessary’.’

‘Most of the content in this welcome was repeated later, so perhaps it could have been shorter (since it’s already a long day).’

More than a third of the comments in this free text field do not concern the welcome, but point out various general issues about the course instead. This indicates that the respondent may have been confused about how to interpret the question regarding the welcome, which some comments directly confirm:

‘I don’t understand this question. Yes, they welcomed me.’
3. Overall evaluation of the course

As part of the evaluation, respondents are asked to assess the extent to which they feel that the course objectives were achieved, and whether the objectives were made clear to them. In addition, they are invited to evaluate the course material (e.g. the level of difficulty) and the duration of the course. They are also asked to describe their expectations prior to the course and to judge whether the course met their expectations. Finally, they are asked whether they feel the course was useful for their development as scientists and to state their general level of satisfaction with the course.

3.1 Course objectives

Figure 3.1 summarises the PhD students’ assessment of the achievement of the course objectives. A fairly large variation can be found in the results from the 12 different course evaluations. Results are displayed both filtered by courses and as a total for the entire period.

Figure 3.1: ‘Do you think the course objectives were achieved?’ (n=17-34)
In total, 71% of the respondents rate the achievement of the course objectives as high (ratings 4 and 5, where 5 equals ‘To a high extent’). This represents a decline of four percentage points (from 75%) compared to the corresponding results from Report 10.

With the exception of one course (the second course held in November), the evaluations show that a majority of respondents feel that the course objectives were achieved: between 61% and 88% give ratings of 4 and 5.

The lowest ratings are found for the second course held in November. Here, 35% of the respondents state that the objectives were achieved. 50% give a medium rating (rating 3) and 16% gave a negative rating (rating 2).

In contrast, the course held in September and the first course held in January receive particularly high ratings for the achievement of the course objectives, with 88% and 86% of the respondents giving a rating of 4 or 5.

**Communication of the course objectives**

The next part of the evaluation asks the PhD students whether they feel the course objectives were made clear to them (Figure 3.2). Again, the results are displayed both as a total for the entire period and filtered for the 12 individual courses, as relatively large variations can be found.
Figure 3.2: ‘Do you think the course objectives were made clear to you?’ (n=17-35)
Figure 3.2 conveys a similar picture to Figure 3.1, namely that the respondents are generally positive, with an average of 77% students stating that the course objectives were made clear to them (ratings of 4 or 5, where 5 equals ‘To a high extent’). This represents an increase compared to the results from Report 10 and Report 9, in which an average of 71% and 63% students, respectively, stated that the course objectives were made clear to them.

This increase in the average rating is notable when taking into consideration that the second course held in November receives a significantly lower rating than the rest of the courses. Only 47% of the respondents state that the objectives were made clear to them, while 28% give a medium rating (rating 3), and 25% give a negative rating (rating 2).

### 3.2 Course material

Prior to the course, participants receive course material that they are encouraged to read before attending the course. As part of the evaluation, respondents are asked whether they feel they received the material well in advance, how much of the material they have read prior to the course, and how they assess the level of difficulty of the course material.

**Receiving the course material**

As shown in Figure 3.3 (see below), the large majority (94%) feel that they received the course material well in advance. The proportion is similar to those in Report 10 (93%) and Report 9 (91%).

*Figure 3.3: ‘Did you receive the course material well in advance?’ (n=322)*
Reading the course material
As shown in Figure 3.4, 24% of the respondents state that they read ‘None’ of the course material in advance, 47% read ‘Less than 50%’ and 29% read ‘50% or more’. These percentages are similar to the results from Report 10. Here, 25% stated that they read ‘None’ of the course material in advance, 42% read ‘Less than 50%’ and 33% read ‘50% or more’.

Figure 3.4: ‘How much of the course material have you read in advance?’ (n=328)

Level of difficulty of the course material
The assessment of the level of difficulty of the course material is shown in Figure 3.5.

Figure 3.5: ‘How do you assess the level of difficulty of the course material?’ (n=239)

89% of the respondents find the level of difficulty of the course material to be ‘Appropriate’ (rating 3). This report thus shows a positive development in the assessment of the level of difficulty of the course material, given that 86% of the respondents in Report 10 found the level of difficulty appropriate.

The group of respondents who judge the level of difficulty to be too difficult (ratings 4 and 5) is 5% in the present report, compared to 4% in the previous report.

3.3 The course in general
The length of the course
58% of the respondents judge the duration of the course to be ‘Appropriate’ (rating 3), whereas more than a third of the respondents (37%) judge it to be too long (rating 4 or 5) and 5% feel that the course was too short (rating 1 or 2).

These results are similar to those of the previous report, in which 58% judged the length of the course to be suitable, while 31% thought it was too long and 6% found the course too short.

Figure 3.6: ‘Do you find the length of the course suitable?’ (n=326)
**Expectations**

Figure 3.7 (below) summarises the PhD students’ assessment of their expectations for the RCR course prior to the course (a new question added in last year’s evaluation).

**Figure 3.7: ‘What were your expectations for the RCR Course prior to enrolment?’ (n=323)**

Figure 3.7 shows that the PhD students did not expect much of the RCR course prior to the course: only 15% state that they had high or very high expectations (rating 4 or 5). Most respondents (57%) rate their expectations as medium (rating 3). In total, 28% state that they had non-existent or poor expectations prior to the course (ratings 1 and 2).

As shown in Figure 3.8, half (52%) of the respondents state that the course met their expectations (ratings 4 and 5, where 5 equals ‘To a high extent’), while 13% state that their expectations were not met (ratings 1 and 2, where 1 equals ‘Not at all’). A neutral group of 35% give the medium rating of 3.

In earlier reports, similar proportions of the population stated that the course met their expectations, although there has been a small decline in the current evaluation (compared to 59% giving ratings of 4 or 5 in Report 10 and 54% in Report 9). In the previous report, 8% of the respondents stated that the course did not meet their expectations (ratings 1 and 2), a percentage which has increased by five percentage points to 13% in the present report.

**Figure 3.8: ‘Did the course fulfill your expectations’? (n=322)**

The respondents’ answers must depend on whether they had high or low expectations before the course. If the course meets the expectations, it can either be because the respondents expected the course to be bad or the opposite.

As shown in figure 3.7, only 15% of the respondents state that they had high expectations (rating 4 or 5), whereas 28% state that their expectations were either non-existent or poor (ratings 1 and 2). As such, many of the respondents who state that their expectations were met to a high extent had no great expectations in the first place. When analysed from a different perspective, the fact that a smaller percentage now state that the course did not meet their expectations compared to the results from the previous report suggests that the course is now perceived to be better than the respondents expected beforehand.

**Development as scientists**

Figure 3.9 (see below) summarises the respondents’ assessment of whether the course is useful for their development as scientists. 59% of the respondents consider the course to be useful (ratings 4 and 5, where 5
equals ‘To a high extent’); 15% state that the course is not useful (ratings 1 and 2, where 1 equals ‘Not at all’); and 26% give a neutral response (rating 3).

These results are quite similar to Report 10, albeit with a small decline in the ratings. In the current assessment, 59% think the course will be useful for their development as scientists, compared to corresponding results of 62% in Report 10. Furthermore, 26% give a neutral response compared to 23% in Report 10. In the current assessment and Report 10 a similar percentage (15%) state that the course will not be useful.

Figure 3.9: ‘Do you think the course will be useful for your development as a scientist?’ (n=328)

General satisfaction
In terms of overall satisfaction with the course (see Figure 3.10 below), the assessment of the individual courses shows that between 31% and 88% of the respondents – on average 64% – are satisfied with the course (ratings 4 and 5).

The course held in February receives the most positive assessment, with a satisfaction rate of 88% and 6% dissatisfied respondents.

The second course held in November receives the lowest rating, with 31% stating that they are satisfied. The number of respondents who state that they are dissatisfied is also significantly higher for the second November course (31%).

Aside from this course, the level of dissatisfaction with the course in general ranges between 0% and 22%, on average 10.6% (ratings of 1 or 2, where 1 equals ‘Very dissatisfied’ and 2 equals ‘Dissatisfied’). The average overall satisfaction of 64% represents a negative development when compared to 70% in Report 10. The result is similar to the overall satisfaction of 63% in Report 9.

Figure 3.10: ‘In general, how satisfied were you with the course?’ (n=17-35)
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<tr>
<td>Respondents</td>
<td>34</td>
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</tr>
<tr>
<td>November</td>
<td>6</td>
<td>24</td>
<td>41</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>January: 1st course</td>
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<td>30</td>
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</tr>
<tr>
<td>March</td>
<td>6</td>
<td>16</td>
<td>24</td>
<td>48</td>
<td>8</td>
</tr>
<tr>
<td>April</td>
<td>9</td>
<td>19</td>
<td>23</td>
<td>50</td>
<td>8</td>
</tr>
<tr>
<td>May</td>
<td>6</td>
<td>18</td>
<td>29</td>
<td>46</td>
<td>8</td>
</tr>
<tr>
<td>June</td>
<td>9</td>
<td>9</td>
<td>33</td>
<td>45</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>24</td>
<td>49</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Respondents</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.4 Qualitative comments on the overall assessment of the course

In the last part of the evaluation, respondents can elaborate on both ‘What was good about the course?’ and the ‘The RCR Course would have been better if...’

In keeping with the generally positive evaluation, 203 of the 345 respondents added comments about what was good about the course. In these comments, the students’ praise focuses on a variety of themes:

1) Praise for the lecturers (37 comments)
2) Praise of student-involving teaching methods:
   a. Group work and interaction with fellow PhD students (26 comments)
   b. Discussions with lectures and students (19 comments)
   c. The use of relatable everyday examples and cases (18 comments)
3) Praise for focussing on RCR:
   a. Students recognise the importance of having a mandatory RCR course, and find that the course touches upon relevant topics in relation to RCR (25 comments)
   b. Inspirational value of the course (11 comments)
4) Praise of specific course content:
   a. Overview of various RCR rules and guidelines (21 comments)
   b. Examples of RCR dilemmas or ‘grey zones’, as well as tips on how to handle these (15 comments)
   c. Information about authorship (15 comments)

In general, the lecturers receive many positive comments on their ability to present the material in an engaging way. Furthermore, the respondents appreciate interactive learning with group exercises and discussions as well as the use of relatable cases. Respondents generally perceive RCR as an important focus area, and find that the course touches upon relevant topics and stimulates reflection on their own research practice. Finally, the respondents highlight specific course content such as information about rules and guidelines, authorship and examples of grey areas related to RCR as especially helpful. The following comments exemplify these positively emphasised themes:

‘The lecturers clearly communicated the information to the students; the contents of the course were precise and focused on areas frequently encountered in the real life of researchers and scientists in their careers.’

‘Very good presentations with examples and summaries. Interactive and integrative to help people to think about important issues. Helpful knowledge.’

‘Overall, it was presented in a very interactive way which made you converse with the other students. That made the whole day more pleasurable and also makes you remember the material much better.’

‘The opportunity to discuss your own research in the context of the course.’

‘The course introduced the most important aspects of RCR and created incentive to be aware and think about RCR in everyday work life.’
‘Seems important to make sure that a good research ethic is established early in career. Nice to see the Singapore statement and discuss/think about issues in relation to it. Good thing to be made aware of possible issues with data handling, which otherwise might not become clear before it is too late.’

‘Examples that highlighted grey areas you encounter much more often, e.g. co-authorship.’

The PhD students are also asked to suggest how the course could be better, that is, elaborate on what they found less positive about the course. Here, 180 of the 345 respondents made critical comments. These suggestions point in different directions and do not for most part signal recurring themes. However, there were four topics that did receive a fair share of suggestions:

1) The length of the course: Some students suggest that the course should be shortened by a few hours by streamlining lectures and condensing the content (31 comments). Other students suggest that the course with its current content should be split across two half days, since they find it difficult to take in more information during the last lectures in the afternoon (17 comments).

2) The relevance of specific lectures: Several students find module 3b irrelevant and suggest shortening or removing it (30 comments). Some students feel the same way about module 3a (10 comments), while other students argue that module 3a should be more specific and thorough (5 comments).

3) Include more cases and examples from ‘the real world’ (14 comments) as well as more interactive exercises (10 comments).

4) Comply with the scheduled end time of the course. Avoid rushing through the last lecture on the programme (10 comments).

The theme that is most commented on is the length of the course, which was also a prominent theme in previous evaluations.8 While it is important to take note of the continued prevalence of critical comments regarding the course’s length, one must also keep in mind that 58% of the respondents in the current evaluation find the duration of the course appropriate. The comments under the fourth theme show that there have been difficulties complying with the scheduled end time of the course, which indicates that the course content ought to be condensed further in order to fit the current timeframe, or conversely that the timeframe ought to be extended in order to fit the current content.

Another theme which was covered by several comments concerns the relevance of module 3b and 3a. Since these lectures receive the lowest ratings in the current evaluation, it is worthwhile considering a few examples of the respondents’ suggestions on how to improve the two lectures:

‘The module about patent and transfer of technology was irrelevant for me (and for many other students I believe). It could have been placed at the end of the day with the option to leave the course if this topic was not relevant for the PhD students.’

‘If the session with the patents and copyrights (which did not look like it concerned a lot of the people attending) instead was held as a parallel session where people with patents/copyrights issues could attend it and people with an interest in for example correct referencing or another subject [could attend a different session].’

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8 Previously the RCR course was a two-day course, but in response to critical evaluations, it was shortened to a one-day course in August 2015.
‘The afternoon sessions were more drawn-out, especially the one on data management and patents. I think these should be halved in length and the extra time should be spent on the morning’s topics.’

‘Some of the topics covered seem superfluous. The module on intellectual property rights covered a lot of the legal process that is not very relevant at this stage. This module could have been much shorter. The module on data management was too superficial. Examples of how to structure and manage data in a more hands-on way would have been more beneficial.’

‘The part about data management could have been more thorough. It seemed like the lecturer was unaware that many of the participants work with human subjects and may obtain data from the national registers. Therefore other rules apply for this kind of data in terms of data management.’

In light of the qualitative comments on the overall assessment of the course, a continued awareness of the duration of the course is recommended, as is a focus on ensuring the relevance of the modules – especially modules 3b and 3a – perhaps by differentiating some modules according to different research fields. Continued use of interactive exercises and relatable everyday examples and cases is also recommended to ensure relevance and applicability to students’ research.

4. Length of the PhD student’s enrolment prior to the RCR course

As part of the evaluation, respondents are asked to state how long they have been working on their PhDs (a relatively new question added in Report 9). The results are presented in figure 4.1

Figure 4.1: ‘How long have you been working on your PhD?’ (n=339)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Just started</td>
<td>17</td>
</tr>
<tr>
<td>1-2 months</td>
<td>66</td>
</tr>
<tr>
<td>3-4 months</td>
<td>77</td>
</tr>
<tr>
<td>5-6 months</td>
<td>60</td>
</tr>
<tr>
<td>7-8 months</td>
<td>25</td>
</tr>
<tr>
<td>9 months and longer</td>
<td>94</td>
</tr>
</tbody>
</table>

The description of the RCR Course in the course catalogue states that the course mainly targets ‘newly enrolled PhD studies’ and PhD students are required to attend the course within the first six months of their PhD studies. The majority of the respondents, 65%, have indeed been working on their PhD for six months or less. Even so, 28% of the current group have been working on their PhD for nine months or longer while 7% have been working on their PhD for seven to eight months.
5. Summary

This report summarises the evaluations of the PhD Responsible Conduct of Research courses (RCR courses) for new PhD students conducted between August 2017 and June 2018. The overall response rate is 74%. Below is a summary of the main results of the current evaluation, along with comparisons with the previous evaluations (Report 10, covering courses held between August 2016 and June 2017, and Report 9, covering courses held between August 2015 and June 2016).

<table>
<thead>
<tr>
<th>1. Assessments of the series of lectures on Responsible Conduct of Research and the welcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>• On average, 69% of the respondents find that the topics of the lectures on Responsible Conduct of Research are communicated well. ‘Module 3b: Intellectual Property Rights’ receives the lowest assessment. Regarding this lecture, 43% feel that the topic was communicated well. In the previous report this lecture also received the lowest rating (Report 10). The two lectures that receive the most positive ratings are ‘Module 1: Overview of the field etc.’ and Module 2: Authorship and Vancouver Guidelines’. Here, 80% and 84%, respectively, find that the topics were communicated well. These two lectures also received the most positive ratings in Reports 10 and 9.</td>
</tr>
<tr>
<td>• In a similar vein, the assessment of the level of difficulty of the lectures on Responsible Conduct of Research is generally positive. The majority of the respondents – between 73% and 83%, on average 78% – feel that all the lectures have an appropriate level of difficulty. These results resemble those of the two previous reports.</td>
</tr>
<tr>
<td>• The Graduate School representative’s welcome was well received. 57% of the participants rate their outcome as ‘High’ or ‘Very high’, whereas only 6% rate their outcome as ‘Non-existent’ or ‘Poor’. When comparing the results to those from Reports 10 and 9, an increase in the level of satisfaction is apparent.</td>
</tr>
<tr>
<td>• Some critical comments are made regarding the lectures on Responsible Conduct of Research despite the otherwise positive assessment. The majority of the comments concern modules 3a and 3b. While module 3a receives mixed feedback, with some comments praising the lecture and others criticising it, module 3b receives uniformly negative feedback in the comments, which state that the lecture was not relevant, focused too much on patents and could have been given in shorter time. Aside from lecture-specific themes, the respondents feel that some lecturers were unprepared, and underline the importance of keeping lectures specific and practically applicable, as well as using student-activating exercises. Finally, some comments suggest that the lectures should be differentiated according to different fields of research in order to keep the course relevant to everyone.</td>
</tr>
</tbody>
</table>
### 2. Course objectives

- In total, 71% of the respondents rate the achievement of the course objectives highly, a decline of four percentage points compared to the corresponding results from the previous report.

- The individual evaluations from each of the 12 courses indicate that respondents generally find that the course objectives have been achieved. With the exception of one course with an exceptionally low rating, between 61% and 88% give ratings of 4 or 5. The lowest rating is found for the second course held in November, where 35% of the respondents state that the course objectives have been achieved. In contrast, the course held in September receives a particularly high rating of 88%.

- Similarly, when it comes to whether the course objectives were made clear to the respondents, the ratings are generally positive, with an average of 77% stating that the course objectives were made clear to them.

- As to the results for the individual courses with regard to whether the objectives of the course were made clear to the respondents, the second course held in November receives particularly low ratings. 47% of respondents give a positive assessment of this course. At the other end of the scale, the first course held in January receives a very positive assessment of 91%.

### 3. Course material

- The large majority (94%) feel that they received the course material well in advance, a result which mirrors that of the previous reports.

- 24% of the respondents read ‘None’ of the course material in advance, 47% read ‘Less than 50%’ and 29% read ‘50% or more’. These percentages are similar to the results in Report 10.

- 89% of the respondents judge the level of difficulty of the course material to be ‘Appropriate’, a slightly improved result compared to the 86% in Report 10. In the present report, 5% judged the course material to be too difficult (ratings 4 and 5) compared to 4% in Report 10.

### 4. Duration of the course

- Since August 2015, the RCR courses have been condensed to a duration of one day instead of two, in response to many critical comments.

- In this evaluation, 58% of the respondents judge the duration of the course to be ‘Appropriate’, whereas 37% judge it to be ‘Too long’ and 5% find it ‘Too short’. This is similar to the results of the previous report.
Some of the qualitative comments concern the length of the course. Some of the PhD students suggest splitting the course into two half days since they found it hard to stay focused in the afternoon of the condensed one-day course. Other respondents find the course too long. However, there is a limited number of qualitative comments that refer to this issue and 58% find the duration appropriate. Nonetheless, since it is a theme in the qualitative comments and given that 37% state that the course is too long, it is advisable to keep the duration of the course in mind and to focus on making all parts of the one-day course interactive and relevant.

### 5. Usefulness for development as scientists

- 59% of the respondents consider the course useful for their careers as scientists, 15% state that the course was not useful for their development as scientists and 26% give a neutral response. These results are similar to those of Report 10, albeit with a small decline in the ratings: 59% now think the course will be useful for their development as scientists compared to 62% in Report 10.

### 6. Overall level of satisfaction with the RCR Course, including prior expectations

- On average, 64% of respondents are satisfied with the RCR course as a whole, while 10.6% are dissatisfied. The average overall satisfaction represents a negative development when compared to 70% in Report 10.

- The course held in February receives the most positive rating: 88% of respondents are satisfied while 6% are dissatisfied. The second course held in November receives the lowest rating. 31% of respondents are satisfied with this course.

- Satisfaction is often linked to expectations. Here, the evaluation shows that the PhD students did not expect much of the RCR course prior to the course: 13% state that they had ‘High expectations’, whereas only 2% had ‘Very high expectations’. Of the respondents, 57% rate their expectations as ‘Medium’, whereas 28% have ‘Non-existent’ or ‘Poor expectations’ prior to the course.

- Upon completion of the course, 52% of the respondents state that the course has met their expectations, while 13% state that their expectations have not been met. 35% give a medium rating. In previous reports, similar shares of the population stated that the course fulfilled their expectations although there has been a small decline in the current evaluation (54% in Report 9 and 59% in Report 10). In the last report, 8% of the respondents stated that the course did not fulfil their expectations, a percentage which has increased by five percentage points to 13% in the present report.

- The respondents’ answers regarding whether their expectations have been met must depend on whether their expectations were high or low. If the course meets the expectations, it can either be because the course was expected to be bad or the opposite. As only 13% of the respondents state that they had high expectations, while 28% state that their expectations were either non-existent or poor, many of the respondents who state that their expectations have been fulfilled to a high extent had no great expectations in the first place. When analysed from a different perspective, the improvement regarding fulfilment of expectations compared to the last report likely indicates that the
respondents now perceive the course to be better than they expected beforehand.

- In the final free text field, many respondents add positive qualitative comments, mainly involving: 1) Praise for the lecturers, 2) Student-involving teaching methods, 3) The importance of focussing on RCR and the inspirational value of the course in this regard, 4) Praise for specific course content such as information about rules and guidelines, authorship and examples of grey areas related to RCR as especially helpful.

- The PhD students are also asked to offer suggestions for how the course could be improved. These suggestions point in different directions, but with some recurring topics. One topic is the relevance of the different modules. Some of the PhD students find that whether the modules are relevant to their PhD depends on their field of research. In particular, module 3b, and to some extent also module 3a, are considered irrelevant and in need of adjustment by the students. Other comments state that the PhD students appreciate interactive exercises and cases from ‘the real world’ in the lectures, and that more exercises and cases would be highly appreciated.

### 7. Length of the PhD students’ enrolment prior to the RCR course

- 28% of the respondents have been working on their PhDs for nine months or longer, 7% have been working on their PhDs for seven-eight months and 65% have been working on their PhDs for six months or less. The description of the RCR Course in the course catalogue states that the course mainly targets ‘newly enrolled PhD studies’ and PhD students are required to attend the course within the first six months of their PhD studies. Therefore, it is worth noting that one third of the population have been working on their PhDs for more than six months. This proportion is similar to that of the previous report, where 34% had been working on their PhDs for more than six months.
Appendix: Questionnaire

Welcome to the evaluation of the Course in Responsible Conduct of Research (RCR) for PhD students

The purpose of this survey is to evaluate the quality and your experience of the RCR course. We hope that you will help us by answering the questionnaire. This will provide us with information that can be used to improve the course.

The survey takes 10-15 minutes to complete. Your responses will be treated confidentially by the Faculty’s Evaluation Unit, which will only send aggregated data to the Graduate School.

If you have any questions about the survey, please contact the Evaluation Unit: Anne Holm Jensen, anne.h.jensen@sund.ku.dk.

Thank you for your help and good luck with your PhD! Please do not hesitate to contact us in the future if you have questions or need assistance.

Best regards

Jørn Wullf Helge, Professor
Head of Graduate School of Health and Medical Sciences

1. Have you attended the RCR Course?

(1) ☐ Yes
(2) ☐ No

Introductory questions

How long have you been working on your PhD?

(1) ☐ Just started
(2) ☐ 1-2 months
(3) ☐ 3-4 months
(4) ☐ 5-6 months
(5) ☐ 7-8 months
(6) ☐ 9 months and longer
What were your expectations for the RCR Course prior to enrolment?

1. Non-existent
2. Poor
3. Medium
4. High
5. Very high
Don’t know

A) Your assessment of the lectures

2. Your assessment of the lectures in Responsible Conduct of Research

In the following, we ask you to assess the different lectures in Responsible Conduct of Research, according to the lecturer’s communication of the topic and the level of difficulty of the lecture.

2. Did the lecturer communicate the topic well in the following lectures?

<table>
<thead>
<tr>
<th></th>
<th>1. Not at all</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5. To a high extent</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a. Module 1: Overview of the field, etc.</td>
<td>(1) ☐</td>
<td>(2) ☐</td>
<td>(3) ☐</td>
<td>(4) ☐</td>
<td>(5) ☐</td>
<td>(0) ☐</td>
</tr>
<tr>
<td>2b. Module 2: Authorship and the Vancouver Guidelines</td>
<td>(1) ☐</td>
<td>(2) ☐</td>
<td>(3) ☐</td>
<td>(4) ☐</td>
<td>(5) ☐</td>
<td>(0) ☐</td>
</tr>
<tr>
<td>2c. Module 3a: Research data management</td>
<td>(1) ☐</td>
<td>(2) ☐</td>
<td>(3) ☐</td>
<td>(4) ☐</td>
<td>(5) ☐</td>
<td>(0) ☐</td>
</tr>
<tr>
<td>2d. Module 3b: Intellectual property rights</td>
<td>(1) ☐</td>
<td>(2) ☐</td>
<td>(3) ☐</td>
<td>(4) ☐</td>
<td>(5) ☐</td>
<td>(0) ☐</td>
</tr>
<tr>
<td>2e. Module 4: Conflicts of interest and commitment, etc.</td>
<td>(1) ☐</td>
<td>(2) ☐</td>
<td>(3) ☐</td>
<td>(4) ☐</td>
<td>(5) ☐</td>
<td>(0) ☐</td>
</tr>
</tbody>
</table>
3. How do you assess the level of difficulty of the following lectures?

<table>
<thead>
<tr>
<th>1. Too low</th>
<th>2. Appropriate</th>
<th>3.</th>
<th>4. Too high</th>
<th>5.</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) □</td>
<td>(2) □</td>
<td>(3) □</td>
<td>(4) □</td>
<td>(5) □</td>
<td>(0) □</td>
</tr>
</tbody>
</table>

3a. Module 1: Overview of the field, etc.

3b. Module 2: Authorship and the Vancouver Guidelines

3c. Module 3a: Research data management

3d. Module 3b: Intellectual property rights

3e. Module 4: Conflicts of interest and commitment, etc.

3f. Do you have further comments regarding the above-mentioned lectures?
____________________________________________________________________________________________________

________________________________________________________________________

4. Your assessment of the welcome by the Graduate School representative

4a. How do you assess your outcome of the Graduate School representative’s welcome?

(1) □ 1. Non-existent
(2) □ 2. Poor
(3) □ 3. Medium
(4) □ 4. High
(5) □ 5. Very high
(0) □ Don’t know
4b. Do you have further comments regarding the Graduate School representative’s welcome?

____________________________________________________________________________________________________

B) Your overall assessment of the course

5. The objectives of the course:

<table>
<thead>
<tr>
<th>1. Not at all</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5. To a high extent</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

5a. Do you think the course objectives were achieved?

5b. Do you think the course objectives were made clear to you?

6. Course material

6a. Did you receive the course material well in advance?

(1) ☐ Yes
(2) ☐ No
(0) ☐ Don’t know

6b. How much of the course material did you read in advance (approximately)?

(1) ☐ None
(2) ☐ Less than 50%
(3) ☐ 50% or more
(0) ☐ Don’t know
6c. How do you assess the level of difficulty of the course material? (NB! Please notice that a different scale is used for this question)

(1) ❑ 1. Too easy
(2) ❑ 2.
(3) ❑ 3. Appropriate
(4) ❑ 4.
(5) ❑ 5. Too difficult
(0) ❑ Don’t know

7. The course in general

7a. Do you find the length of the course suitable? (NB! Please notice that a different scale is used for this question)

(1) ❑ 1. Too short
(2) ❑ 2.
(3) ❑ 3. Appropriate
(4) ❑ 4.
(5) ❑ 5. Too long
(0) ❑ Don’t know

7b. Did the course fulfil your expectations?

(1) ❑ 1. Not at all
(2) ❑ 2.
(3) ❑ 3.
(4) ❑ 4.
(5) ❑ 5. To a high extent
(0) ❑ Don’t know
7c. Do you think the course will be useful for your development as a scientist?

<table>
<thead>
<tr>
<th></th>
<th>1. Not at all</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5. To a high extent</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

7d. In general, how satisfied were you with the course?

|---|---|---|---|---|---|---|

7e. What was good about the course?

__________________________________________________________________________________
__________________________________________________________________________________

7f. The RCR Course would have been better if... (Please give suggestions on how the course can be further improved)

__________________________________________________________________________________
__________________________________________________________________________________

7g. If you have further comments regarding the RCR Course, please let us know:

__________________________________________________________________________________
__________________________________________________________________________________
8. If you have further comments regarding this survey, please let us know:

________________________________________________________________________________________
________________________________________________________________________________________

Thank you for your participation!

Please remember to click ‘Finish’ when you have completed the questionnaire to register your answers.