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Department of Chemistry
Lund University

Evaluation summary for KEMM13 Advanced Biochemistry 15 hp VT2018

Course leader: Urban Johanson

Other teachers: Susanna Horsefield, Veronika Nesverova, Tinna Pálmadóttir, Dev Thacker

Guest lecturers: Henrik Stålblbrand, Ingemar André

Number of students: 24, whereof one not taking part in practicals or exercises

Grades after 2nd exam: 1 not passed (UK), 11 passed (G), 10 passed with honours (VG).

Evaluation:

I. Summary of course evaluations

Mid-course evaluation: The meeting is summarized in the PM “Notes from mid-course evaluation meeting KEMM13 2018-04-23” made available for the students via L@L. It was concluded that overall the course is working fine, but there is still some room for improvements of lectures (UJ), lab instructions and literature study instructions. Scheduled meetings with each labgroup in Lab 2 were suggested by the students.

Survey&Report: 21 answers of 24 respondents (88%). The categories were rated from 1 (very bad) up to 5 (very good) and opportunity to add free text was provided on each question. The general impression of the course is very good (average 4.2), nevertheless, slightly lower than the five-year-average (4.4). Teachers and Practicals are the most appreciated categories (average 4.3 and 4.1, respectively), but like all categories also these are lower rated than corresponding five-year-averages (4.7 and 4.5). The two categories Lectures and Exercises received the lowest rating (both 3.6; five-year-averages 3.8 and 4.0). For Lectures this is nonetheless a slight improvement compared to last year (3.4). The self-estimated workload is 2.4, which corresponds to an average of >30 h/week, which breaks the declining trend for the last few years.

The free text answers specified that the students particularly liked the lectures by SH and the red/green cards used for quizzes, whereas lectures by UJ were less clear and harder to follow. The comments on Exercises are in general positive but some revision of the instructions/wording of Problems is suggested. The help and commitment of lab assistants were greatly appreciated. Nevertheless, planning of Lab2 is perceived as particular challenging and scheduled individual meetings with each group and more time to review Lab2 plans were suggested by students. Smaller lab groups and better equipped lab are other suggestions



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for improvement. Some difficulties to find relevant information for particular proteins in the advised literature since lectures were not following the chapters in the textbook, was also noted.

II. Comments by teaching team

Overall the course is working fine but there is room for improvements. It should be emphasized that the larger number of students made it much more challenging to give the course this year and is likely to be the major cause of many of the lower ratings this year. It directly affected the size of lab groups and our ability to give individual feedback. Increasing the number of students further, will directly affect the quality of the course in its current form. Unfortunately, suggested individual planning meetings with each lab group is not an option as it would require extra teaching time. Furthermore, it is important that the planning process is open for all, so the groups can learn from each other and the feedback given by teachers. The lectures by the course leader didn't work out so well this year and should be revised while still retaining the aim of training student's skills to find and extract relevant information in books and original articles.

III. Evaluation of implemented changes of the course

A number of changes have been implemented this year.

- 1) SH has taken over the lectures on Bioenergetics and introduced quizzes which are answered with red/green cards. These lectures and quizzes are greatly appreciated by students.
- 2) Two guest lectures by researchers from the Division of Biochemistry and Structural Biology have been added. A positive comment under the heading "Something particularly like..." may be related to this.
- 3) All practicals were done in groups of three persons. This was out of necessity, but not appreciated by students.
- 4) The textbook on Bioenergetics was replaced by articles and some chapters in other books. No comments by students on this - it was not specifically addressed in evaluation - but seems to have worked.
- 5) Changed time and more time for primer design and reviewing of primers in schedule. No student comments on this, but assistants think it works much better now.
- 6) Encouraged creativity in detection methods/assays of their POI. Stressed that Western blot with His-tag Ab is only the last option for detection. Added creativity/originality in detection assay as important criterion in the poster competition. This seems to have created more variability among the projects, but also made it more challenging and might have increased the stress in the planning stage, as indicated in many comments.
- 7) Only uploaded one poster example from 2016 at L@L, chose one that was not using WB for detection. Seems to have been sufficient.



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- 8) Instruments were moved to the course lab - still there was a complaint of under equipped course lab.
- 9) Problem 3 was revised to add an exercise on finding and compiling information from original articles that are linked to lectures. Comments indicate that some improvements might be needed.
- 10) Used assignments in L@L for all hand-ins. Worked fine – no comments.
- 11) Revised provided original articles. Still some complaints over too many papers to read.
- 12) Provide all relevant earlier exams at L@L. Worked fine.
- 13) Motivate students to invest more time in literature studies. Promote the course literature (text books and articles) as the most important source of information. The increase in the self-evaluated workload indicate that this might have worked to some degree.
- 14) Point out at introduction that handouts are not intended as a standalone source for studies. Lectures serve as an indication of what parts of the course literature that are relevant and should be more studied thorough. Students' comments indicate that some have noticed this. On the other hand, a closer connection between literature is still requested by others.

IV. Suggested changes

- Revise lectures to provide a clearer structure (UJ).
- Consider using quizzes and red/green cards in lectures (UJ).
- Consider revision/change of Problem 2.
- Upgrade lab equipment.
- Add specific questions in electronic evaluation on: Schedule, Course organization, Exam, Guest lectures.
- Add Free-text option in evaluation to allow students to give advices to next generation of students on how to succeed on the course.
- Better explain the idea of using original research articles as an important part of the course literature as a progression from text book based teaching towards the normal situation in research, where information is only extracted from original articles.

2018-08-31, summary compiled by Urban Johanson

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