

## Evaluation summary for KEMM13 Advanced Biochemistry 15 hp VT2017 2017-06-28

**Course leader:** Urban Johanson

**Other teachers:** Hans-Erik Åkerlund, Susanna Törnroth-Horsefield, Stefan Kreida, Veronika Nesverova, Tinna Pálmadóttir.

**Students:** 11 + 1 re-registered from last year.

**Outcome after 2<sup>nd</sup> exam:** 5 (42%) passed the exam with honors, 3 (25%) passed, 3 (25%) did not pass. All 11 first-time registered students passed the other mandatory parts. The re-registered student did not attend any part of the course, including exams.

### Evaluation:

#### I. Summary of course evaluations

*Mid-course evaluation:* The meeting is summarized in the PM “Notes from mid-course evaluation meeting KEMM13 2017-04-24”, which was made available at L@L. It was concluded that overall the course is working fine and apart from a request of a checklist for the project presentation vers. 2.0, no issues that called for immediate action were identified. Some uncertainty regarding problem exercises, red thread and most important point in lectures, as well as difficulties with hand-outs as stand-alone source for learning were noted. In response to the feedback a checklist was provided at L@L 2017-04-25 and suggestions for improvements of next course are put forward under point IV below.

*Survey&Report:* 9 answers of 11 respondents (82%). 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 4.4), which is consistent with the rating last year (4.5), although the spread in the rating was larger this year. The lab projects (4.8, same as last year) and assistants & teachers (4.7, last year 5.0) were most appreciated by the students. In contrast the rating of the lecture part was lower than usual (3.4, last year 4.1), whereas the problem solving and project planning showed a stable rating after improving last year (4.1, last year 4.2). The self-estimated workload shows a declining trend (1.8, last year 2.7), now in average corresponding to less than 20-30 h/week. The free text answers specified that the students particularly liked the labs, the commitment of assistants, and also the discussions at problem exercises, whereas lectures, too little work directly related to lectures, uncertainty on what to study, short time between poster presentation and exam were mentioned in the most-disliked section. More lectures on particular proteins, more exam-like problem exercises, more focused problem questions, more “solid” topics and seminar-like form for problem exercises, improvements of power point slides, were suggested to improve the course.

#### II. Comments by course leader

On the whole the course is well established and is running smoothly. The instructions and support for the project (Lab2) has gradually improved over the last years and in terms of how many and how far the students managed to realize their plans results were better than ever. This is also reflected in the evaluation and in contrast to previous years none of the respondents asked for more time for Lab2.

There are several suggestions in the evaluation for how the problem exercises can be further developed that should be considered. However, based on the evaluation lectures hold the greatest potential for improvements. The relatively low rating of the lectures this year is intriguing since no major changes were implemented this term. It is possible that the rating of the lectures is connected to the low estimation of time invested in the course. More than half of the students estimated they spent < 20 h/week, which may indicate that little time was devoted to studies of the specified literature, and that lectures and handouts instead became the main source of information. In line with this the total outcome (67%, taking both passed and passed with honors into account) is slightly lower than the 5-y average (76%).

### **III. Evaluation of implemented changes of the course**

The provided specification of expected duration and content of presentations of project plans vers. 1.0 and 2.0 worked fine. Unnecessary details were avoided at the first presentation and all relevant aspects were covered in a time efficient way at the second presentation. These instructions will be used also in future versions of the course. The renumbering of the problems was implemented and prevented the confusion previously reported. An assignment was created for Problem 1 whereas Problem 2 and 3 were handed in via email. No confusion were noted, but it would be good to use assignments for all exercises to be consistent.

To better support the primer design and to make it clearer that the students should design the primers before they are reviewed by the assistants, the previous event “Reviewing and ordering primers..” was divided into two parts without increasing the total scheduled time. In the first part “Primer design” support was provided which was followed by “Reviewing and ordering primers” the next day. In between these activities, an assignment was scheduled assuring that sequences of the GOI and primers were handed in by the students before the reviewing event. Due to this students were better prepared than last year, nevertheless the reviewing still required more time than accounted for in the schedule.

### **IV. Suggested changes**

- Motivate students to invest more time in literature studies. Promote the course literature (text books and articles) as the most important source of information.
- 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.
- Revise power point slides to better clarify red thread and main points.
- Provide all relevant earlier exams at L@L.
- Revise provided original articles and make new exam questions that are directly linked.
- Use assignments in L@L for all hand-ins.
- Add more time for primer reviewing and between design and assignment.
- Consider revision of problem exercises.
- Consider adding a lecture on “How to read and evaluate a scientific paper”.
- Consider adding an exercise on finding and compiling information from original articles that are linked to lectures.
- Consider adding related exam questions assess ability to extract relevant information from a provided article.