Course analysis (course evaluation) – Biomedicine Bachelor Programme

Course code 1BI049	**Course title** Molecular Medicine - Oncology	**Credits** 15 ECTS
Semester Autumn	**Period** 2019-09-02 – 2019-11-01	

Course coordinator Nick Tobin (NT)	**Examiner** Nick Tobin (NT)
Teacher in charge of component Veronica Höiom (VH; PBLs) Ingemar Ernberg (IE; Labs) Paolo Frumento (PF; Biostatistics)	**Other participating teachers** A range of teachers, both from within and outside the Department of Oncology - Pathology, including both clinicians and researchers (from both KI and KS).

Number of registered students during the three week check 54	**Number approved on the last course date** 38	**Response frequency course valuation survey** 26, 48.15%
Other methods for student influence (in addition to concluding course valuation) Students were repeatedly encouraged to provide ongoing feedback to the course coordinator (NT) who was present at all lectures for the duration of the course. NT also sought opinions from the students before or after lectures when decisions such as where the exam would be held were being taken. In addition, students were reminded that they could contact their class representatives with their views for discussion at a course council. The council was held towards the end of the course with class representatives.		
Feedback reporting of the course valuation results to the students The 2018 summary of course survey was made available on the course webpage (PingPong) for the incoming 2019 students. The 2019 summary was also uploaded to PingPong shortly after the course end. At the course introductory presentation NT highlighted the strengths of the course and what changes that had been made to improve upon the perceived weaknesses - as taken from the 2018 survey. The importance of receiving feedback on the course was also discussed along with demonstration of how feedback from previous years has helped to shaped the structure and content of course in its current form.		

Note that...

The analysis should (together with a summarising quantitative summary of the students' course valuation) be communicated to the education committee at the department responsible for the course and for programme courses also the programme coordinating committee.

The analysis was communicated to the education committee on: 22nd January 2020
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1. Description of any conducted changes since the previous course occasion based on the views of former students

- **Exam:** Biostatistics was removed from the exam paper as a written component and replaced with a practical code-based exam run by PF – this improved the constructive alignment of the biostatistical aspect of the course

- **Practise exam:** The students wanted this to be more structured, as such NT wrote the practise exam along with answers in order to make this a better learning experience

- **Subject conclusions:** Within each theme week (Breast cancer, lymphoma and colorectal cancer) we have always had conclusion/summary lectures. Students have tended to find these boring and repetitive. As a trial, we replace one of these lectures with molecular tumour board instead. This was very well received and is something we will continue with in future

- **Lecturers:** New lecturers were introduced to the course to 1. Replace previous lecturers who had received low scores/poor feedback two years in a row and 2. Introduce new subject material e.g. Mouse Models

- **Labs:** Lab manuals were updated in response to student feedback from 2018. New researchers took over running Lab1 (Nicolas Fritz) and Lab 3 (Hero Nikdin) and performed admirably in their first time in charge

2. Brief summary of the students' valuations of the course

(Based on the students' quantitative responses to the course valuation and key views from free text responses. Quantitative summary and any graphs are attached.)

The quantitative feedback on the course was in general very positive. Students felt that they developed valuable skills and expertise, achieved the intended learning outcomes for the course and were aware of the common themes running through the course. Importantly they felt their feedback was listened to and that they had someone to turn to when they had problems with the course or its content. Finally, the structure and workload of the course were perceived as good and in line with course learning outcomes.

One thing that could be improved on could be to clarify what feedback the students receive and how it can be important for their development. Direct feedback in our course comes mostly during PBLs and then in the form of exam results. In this instance we could make it clearer that the feedback received during PBLs contributes to the student's development and learning.

3. The course coordinator's reflections on the implementation and results of the course

Strengths of the course:

- The course structure and organisation is very strong, this was mentioned by a large number of students in the course feedback
- The biostatistics part of the course and specifically the tutor PF received a lot of praise, it is an essential part of the course and moving the exam to being standalone seems to have been a good decision
- The connection to the oncology clinic with numerous lecturers and PBLs containing a clinical focus is central to the success of the course and highly appreciated by students
- The mix of lecturers, labs, PBLs and seminars has the combined effect of stimulating life-long learning. Often the students receive similar information but from clinical and research viewpoints, encouraging a deep understanding of the subject matter

Weaknesses of the course:

- Some lectures can be improved on, specifically by adding summary/ conclusions slides its clearer to the students what they are expected to know
- Some of the subject matter covered in the course has been covered previously earlier in the program, as such we need to be much better at focusing on specific subjects in the cancer setting (e.g. cell cycle has been previously covered in year 1, so we need to focus on the cell cycle in cancer)
- The final exam result was based entirely on examinations, here we could include marks from labs or PBLs
- The class sizes are growing ad we have too many students in PBL and labs groups, will need to make more groups of smaller sizes

4. Other views

The general atmosphere amongst the course leadership and organisation is one of positivity. The feedback we have received from students along with lecturers is both encouraging and motivating. We seem to have found a good balance between biological and clinical molecular oncology as well as between the number and structure of lectures, PBLs, seminars and labs. This is not to say there are no improvements to be made, but rather that we have an excellent foundation to build upon.

As a new course leader, I have had some difficulties that are perhaps useful to reflect on given that I am seeing them for the first time with fresh eyes. If I want to implement a new lecture or subject matter it is hard for me to find information on what has been done on other courses in the program before in order to avoid repetition. Similarly, being appointed to a position in charge of a course does not mean that one is necessarily a good leader/ organiser or most importantly of all – knowledgeable about pedagogic techniques. I do not know the best practises for running PBLs, structuring an exam, writing lab reports or structuring a course to ensure deep and life-long learning experiences. In essence I turned up my first day to begin to organise the course and have been playing catch-up ever since. It would have been informative if there was some documentation I was sent or pointed towards as a new course leader which outlined my duties or what is expected of me. It's not that this literature doesn't exist (I'm sure it does), but I didn't know where to find it, what to search for or what to read as relevant for my role in the Biomedicine program. Perhaps this is something that could be sent to new course leaders in the program when they are first appointed? Finally, and related to this, ongoing education on the aforementioned "best-practices" should likely also be encouraged or better still – provided, by the Biomedicine program to ensure we're making use of the latest knowledge and techniques.

5. Course coordinator's conclusions and any suggestions for changes

(If changes are suggested, state who is responsible for implementing them and provide a schedule.)

The overarching conclusion from the 2019 MM-O course should be one of positivity and optimism for future iterations on the basis of a strong and well organised foundation. The following changes will be made however with the aim of improving the course on the basis of student and teacher feedback:

- Lab and PBL group sizes will be reduced by increasing the number of groups from 6 to 9 and adding in additional Lab/PBL days (Responsible: Monica Ringheim, Veronica Höiom, Lab leaders)
- One lab (lab 2 on in vitro) will be reduced from 5 days to 3 in order to streamline and improve the lab itself (Responsible Ingemar Ernberg)
- Lecturers will be asked to add a summary slide on what subject matter is the most important from their presentation in order to make the lecture intended learning outcomes clearer. In addition, all lecturers will be given the feedback written by the students in the interest of continued improvement (Responsible. Nick Tobin)
- The biostatistics exam will no longer count towards the final exam and will be standalone exam graded pass/fail (Responsible: Nick Tobin and new Biostatistician at IMM)

- Instead PBLs and Labs will count towards the final exam (10% each) so that the entire grade for the course is not based solely on written examinations (Responsible: Nick Tobin)
- If possible, the course will switch to a digital exam, although for feasibility reasons outside of our control this may have to wait until 2021 (Responsible: Nick Tobin)
- Immunotherapy will be introduced to the PBLs and clearer guidelines will be provided to PBL tutors (Responsible: Veronica Höiom)

Appendices:

Course survey HT19