Course syllabus for

Frontiers in Biomedicine: Research project 2, 15 credits

Avancerad biomedicin: forskningsprojekt 2, 15 hp
This course syllabus is valid from autumn 2022.
Please note that the course syllabus is available in the following versions:
Autumn2022 , Autumn2023

Course code	4BI124
Course name	Frontiers in Biomedicine: Research project 2
Credits	15 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Biomedicine
Level	AV - Second cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Microbiology, Tumor and Cell Biology
Decided by	Programme committee for study programmes in biomedicine
Decision date	2022-03-23
Course syllabus valid from	Autumn 2022

Specific entry requirements

At least the grade G (Pass) for the courses Frontiers in Biomedicine, Applied Biostatistics, Bioinformatics, semester 1 elective course, Bioethics and Laboratory Animal Science, Applied Biomedical Communication and Professional Development, and registration for the course Frontiers in Biomedicine: Research Project 1, within the Master's Programme in Biomedicine.

Objectives

The aim of the course is for the student to perform a research project under supervision according to an individual study plan, and to broaden and deepen the student's theoretical and methodological knowledge within the chosen field of biomedicine. The student will also summarise the results of the project in a short research report, present them in written and oral formats during a poster-session, and discuss with peers and teachers.

On completion of the course, the student should be able to:

Regarding knowledge and understanding

- demonstrate knowledge of a specific research topic through selection, analysis and discussion of

literature relevant for the research area, and through considering the perspective of translational research;
- discuss and compare methodologies relevant for the research project.

Regarding competence and skills

- find and summarise relevant literature;
- conduct a research project, and document, discuss and visualise the results using a coherent scientific approach;
- show independent, critical and creative thinking when investigating a biomedical research question;
- critically and objectively assess others' scientific work and give relevant feedback;
- formulate new scientific questions that arise during a research project.

Regarding judgement and approach

- handle scientific material and data in a safe, responsible and ethically correct way, according to Karolinska Institutet's guidelines;
- demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used;
- demonstrate awareness of ethical-, gender- and sustainablility-related issues regarding the research topic.

Content

The course is based on individual research work including literature studies according to a specified individual study plan (ISP). The ISP will be written by both the supervisor and the student, and serves as a project description. At the end of the practical work, the student will write a research report and a conference abstract. A poster containing the research results will be designed, presented and discussed. Data collection may be performed at universities or governmental authorities other than Karolinska Institutet, or within industry.

Teaching methods

The work will be done under supervision and the student is expected to attend lab meetings, project meetings, journal clubs and other activities as deemed relevant by the supervisor. The student will also be required to read appropriate scientific literature, relevant to the project and/or recommended by the supervisor.

Examination

The examination consists of a written research report, a written abstract and a poster presentation. The examiner sets the grade (Fail/Pass/Pass with distinction) after consultation with the supervisor and the examining teacher based on the work performance, the abstract, the report and the presentation.

Compulsory participation
The student's presence in the host laboratory or workplace during the duration of the course is compulsory, unless otherwise advised by the supervisor.

The course examiner assesses if and, in that case, how absence from compulsory components can be compensated for. A student's study results cannot be finalised/registered until the student has participated in the compulsory components or compensated for their absence in accordance with the examiner's instructions. Absence from a compulsory component may mean that the student cannot compensate for absence until the next time the course is given.

Limitations of the number of examinations or practical training sessions:
Students who have not passed the regular examination are entitled to participate in five more examinations. If the student has failed six examinations/tests, no additional examination or new admission is provided.

The number of times that the student has participated in one and the same examination is regarded as an examination session. Submission of a blank examination is regarded as an examination. An examination for which the student registered but not participated in, will not be counted as an examination.

If there are special grounds, or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus's regulations on the examination form, the number of examination opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes as well as the level of expected skills, knowledge and abilities may not be changed, removed or reduced.

Other directives

The course language is English and examination is performed in English.

Course evaluation will be carried out in accordance with the guidelines established by the Board of Higher Education.

Literature and other teaching aids

Individual reading list as stated in the ISP, and other teaching aids as determined by the project supervisor.