



LUND
UNIVERSITY

Faculty of Medicine

BIMB51, Biomedicine: Applied Biomedicine, 7.5 credits *Biomedicin: Tillämpad biomedicin, 7,5 högskolepoäng* First Cycle / Grundnivå

Details of approval

The syllabus was approved by The Master's Programmes Board on 2022-03-22 to be valid from 2022-03-29, autumn semester 2022.

General Information

The course is a compulsory course in the Bachelor's programme in Biomedicine and is offered in semester 5.

Language of instruction: English

Main field of studies

Biomedicine

Depth of study relative to the degree requirements

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

Learning outcomes

Knowledge and understanding

On completion of the course, the students shall be able to:

- describe the structure of a medical research article and what separates scientific writing from other types of writing
- account for relevant statistical methods and their strengths and weaknesses in biomedical research projects
- account for basic publication ethic guidelines, publication forms and discuss bibliometric methods

Competence and skills

On completion of the course, the students shall be able to:

- choose and justify statistical methods for a scientific project
- plan and present how projects can be organised, managed and budgeted
- summarise relevant scientific and academic qualifications in a curriculum vitae

This is a translation of the course
syllabus approved in Swedish

- summarise research results in order to argue for and justify the importance of the research e.g. in a cover letter
- identify ethical problems in a biomedical research project and discuss the need for ethical approvals
- behave with a professional approach, respect the contributions of others in discussions on applied biomedicine and meet given deadlines

Judgement and approach

On completion of the course, the students shall be able to:

- reflect on how the benefits of a biomedical project can be justified in relation to the societal resources and sustainability
- reflect on the individual researcher's responsibility for conducting research with reasonable ethics-based rationale

Course content

During the course, the students work on the basis of project management, organisation and planning of a biomedical research project that is to result in a project plan. This includes how science is financed and evaluated as well as training in how to compile a list of their own qualifications. The course also focuses on the characteristics of scientific communication and what is required for publication with regard to both content and ethics.

Biostatistics has an important role in the course and includes the selection and justification of statistical methods for biomedical projects as well as the identification of strengths and weaknesses of different methods. Bioethics and societal benefit in relation to the cost of the implementation of the projects will also be discussed and debated.

Course design

The working methods in the course mainly focus on active student learning, requiring student preparation prior to each teaching component. The students are expected to act professionally and, just as in a future work situations, to participate constructively in the group work to enable the group to make progress. The course contains several practical components that entail both individual training and group work to solve problems.

Assessment

The assessment is based on two components. The course portfolio includes a project plan that illustrates the feasibility of the project, a summary of the significance of the project, a reflection on its ethical aspects, cost and societal benefit as well as a curriculum vitae. Furthermore, the need for ethical approvals or ethical problems in publication are reflected upon. Students will also complete a biostatistics assignment as a part of the course portfolio.

Assessment of the topical knowledge outcomes is based on a multiple-choice test.

Under special circumstances, other forms of assessment may apply.

The examiner, in consultation with Disability Support Services, may deviate from the

regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass, Pass with distinction.

For the grade of Pass as a final grade, students must have passed all of the components. For the grade of Pass with Distinction as a final grade, students must also have been awarded the grade of Pass with Distinction on the course portfolio.

1. Course portfolio 6 credits (Fail/Pass/Pass with Distinction)
2. Multiple-choice test 1.5 credits (Fail/Pass)

Entry requirements

Passed courses up to and including the first half of Semester 4 (105 credits) and completed courses in Semesters 4 and 5.

Subcourses in BIMB51, Biomedicine: Applied Biomedicine

Applies from H22

- 2201 Course portfolio, 6,0 hp
Grading scale: Fail, Pass, Pass with distinction
- 2202 Multiple-choice questions, 1,5 hp
Grading scale: Fail, Pass