Faculty of Medicine

BIMB50, Biomedicine: Frontiers in Translational and Molecular Medicine, 22.5 credits

Biomedicin: Forskningsfronten i translationell och molekylär medicin, 22,5 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	*Depth of study relative to the degree requirements*
Biomedicine	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

- explain and integrate molecular, cellular and physiological aspects of diseases e.g. in cardiopulmonary medicine, neurology, infection/immunology, endocrinology and oncology
- provide examples of the possibilities and limitations of new treatments to treat and/or prevent the onset of disease in e.g. cardiopulmonary medicine, neurology, infection/immunology, endocrinology and oncology

Competence and skills

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

- synthesise and present information from original and review articles within the course topics and put this information in a medically relevant context
- formulate hypotheses with scientific basis in disease progression and treatment with aim to develop new diagnostic, prognostic and/or therapeutic methods
- apply constructive feedback according to a scientific peer-review process
- review, evaluate and prioritise research programmes similar to the process used in used in research funding assessment panels
- identify the societal need for biomedical research and communicate results and their significance to the public
- behave with a professional approach, respect the contributions of others in discussions on translational and molecular medicine and meet given deadlines

Judgement and approach

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

- consider the use, risks and ethical aspects of new treatment methods such as gene and stem cell treatment, biological drugs and treatments in precision medicine
- evaluate the needs and consequences of translational and molecular research in relation to the global sustainable development goals

Course content

During the course, the students will carry out integrated work on current research results in e.g. cardiopulmonar medicine, neurology, infection/immunology, endocrinology and oncology. Applications during the course include the writing of a review article and a research programme focused on the areas of the course. During the course, the students will also apply different strategies to inform the public about current knowledge in translational and molecular medicine and to apply feedback according to a scientific review procedure.

Course design

The course starts with five weeks of theoretical specialisation and study of the field of molecular medicine. Thereafter, the knowledge is applied in several practical components that include both individual assignments and group work to solve problems. 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 future work situations, to participate constructively in group work to enable the group to make progress.

Assessment

The assessment is based on two components. The course portfolio consists of written assignments (review article, research programme and feedback), written and oral information about the current knowledge in social media and participation in an assessment group for the ranking of research funding applications. This is similar to a research funding assessment panel.

The assessment of the contents of the first five weeks of theory in the course is based on a written examination.

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 have also been awarded the grade of Pass with Distinction on the course portfolio.

1. Course portfolio 15 credits (Fail/Pass/Pass with Distinction)
2. Written examination 7.5 credits (Fail/Pass)

Entry requirements

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

Further information

Partially replaces the course BIMA81 Biomedicine: Molecular Medicine.

Subcourses in BIMB50, Biomedicine: Frontiers in Translational and Molecular Medicine

Applies from H22

2201 Course portfolio, 15,0 hp
Grading scale: Fail, Pass, Pass with distinction
2202 Written test, 7,5 hp
Grading scale: Fail, Pass