Faculty of Medicine

BIMB41, Biomedicine: Molecular Basis of Disease, 7.5 credits

Biomedicin: Molekylärt ursprung till sjukdom, 7,5 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by The Master's Programmes Board on 2021-09-07 to be valid from 2021-09-14, spring semester 2022.

General Information

This is a compulsory course in the Biomedicine Programme and is included in semester 4.

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

- account for the basic terms, principles and mechanisms within general pathology
- explain known and possible underlying molecular and cellular pathophysiological mechanisms for common diseases
- give an account of the molecular connections in organ system-related diseases

Competence and skills

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

- search for, critically review and compile published research about pathophysiological mechanisms and diseases
- evaluate, analyse and present scientific information within pathophysiology

- behave with a professional approach, respect others' contributions to discussions of pathophysiological mechanisms and diseases, and meet set deadlines
- review and give constructive feedback on other students' written assignments in the subject area of the course

Judgement and approach

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

- reflect on how environmental factors and socioepidemiological factors influence disease development on global and individual levels
- reflect on scientific and ethical issues that concern pathophysiology
- reflect on the individual's contribution to the group and how this has influenced the work and development of the group.

Course content

Diseases that integrate physiology, cell biology and chemistry with pathophysiology are the key element of the course. The course consists of four modules with an aim to create conditions for a holistic perspective on these diseases at the molecular, cellular and systemic level. The first module focuses on basic pathophysiology at the molecular level. Other modules focus on organ system-related diseases such as kidney diseases, cardiovascular diseases, metabolic diseases and their complications.

Course design

The working methods are mainly based on active study, which set requirements for the students to prepare before the teaching components. The students are expected to act professionally and, just as in a future work situation, participate constructively in the working group to enable the group to make progress.

The teaching combines lectures, individual preparation, applications and multiple-choice questions for each module. To attain the stated proficiencies and practise their approach and assessment skills, the students will work on applications in groups as well as on individual assignments concerning specific cases. In connection with these cases, the students will read, evaluate and refer to scientific literature. Regarding these applications, different solutions to the cases are presented and discussed.

Assessment

The learning outcomes are examined through the following assessed components:
Course portfolio 5 credits (Fail/Pass/Pass with Distinction)
Multiple-choice questions 2.5 credits (Fail/Pass)

The learning outcomes of the course are continuously assessed by multiple-choice questions that relate to the content of the four modules. The course portfolio is assessed through an individual work that is presented in writing and orally, feedback on the work of a fellow student and a written reflection on the individual's contribution in the group. The course portfolio also includes participation in group exercises and written assignments with associated components.

If there are special reasons, 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.
To achieve the grade of Pass as a final grade, the grade of Pass is required on all components. To achieve the grade of Pass with Distinction as a final grade, the grade of Pass with Distinction is required on the course portfolio.

Entry requirements

Passed examinations and course components in the Biomedicine Programme's semesters 1-3, comprising at least 60 credits and completion of the course BIMB40 (Organ Systems and Homeostasis of the Human Body).

Subcourses in BIMB41, Biomedicine: Molecular Basis of Disease

Applies from V22

2201 Course portfolio, 5,0 hp
Grading scale: Fail, Pass, Pass with distinction
2202 Multiple-choice questions, 2,5 hp
Grading scale: Fail, Pass