Faculty of Medicine

MGBIM, Bachelor's Programme in Biomedicine, 180 credits

Biomedicinprogrammet, 180 högskolepoäng

First-cycle programme not requiring previous university studies / Program utan akademiska förkunskapskrav och med slutlig examen på grundnivå

Decision

The syllabus was approved by Undergraduate Education Board, Faculty of Medicine on 2019-05-28 and was last revised on 2025-10-14 (U 2025/763). The revised syllabus comes into effect 2025-10-14 and is valid from the autumn semester 2026.

Programme description

The Bachelor of Medical Science specialising in Biomedicine is a degree combining science and medicine. The programme prepares students for a future professional role in biomedical research (whether in the private sector or in academia). The objective of the programme is to provide students with an understanding of molecular mechanisms, biomedical methods and functions of human biology, and with an ability to apply knowledge and skills to issues of relevance to the onset and treatment of disease in humans. The programme is designed to provide a gradual development of knowledge and skills starting with molecular processes and expanding to comprise more complex systems with regard to health and disease. Students receive training and feedback within the following important fields of biomedical expertise: 1) research communication, 2) research methods, 3) problem solving, 4) leadership, 5) sustainable development, 6) judgment, and 7) biomedical entrepreneurship. The programme concludes with an independent research project comprising 30 credits in the final semester.

The programme has an international focus and prepares students for a global career. Furthermore, knowledge of biomedicine is becoming an increasingly important part of the everyday lives of many people, in everything from personal health decisions to politics and culture. Consequently, the goal is that students graduating from the programme will be able to conduct biomedical research and development in both companies and universities or other public sector organisations, but also that they will be able to act as custodians, communicators and developers of biomedical knowledge in other roles, such as that of science journalist, lecturer in higher education or politician.

The language of instruction is English.

Goals

On completion of the programme, the student must have achieved the learning outcomes specified in the Higher Education Ordinance (2006:1053), Annex 2, Qualifications Ordinance:

Knowledge and understanding

For a Degree of Bachelor the student shall

- demonstrate knowledge and understanding in the main field of study, including knowledge of the disciplinary foundation of the field, knowledge of applicable methodologies in the field, specialised study in some aspect of the field as well as awareness of current research issues.

Competence and skills

For a Degree of Bachelor the student shall

- demonstrate the ability to search for, gather, evaluate and critically interpret the relevant information for a formulated problem and also discuss phenomena, issues and situations critically
- demonstrate the ability to identify, formulate and solve problems autonomously and to complete tasks within predetermined time frames
- demonstrate the ability to present and discuss information, problems and solutions in speech and writing and in dialogue with different audiences, and
- demonstrate the skills required to work autonomously in the main field of study.

Judgement and approach

For a Degree of Bachelor the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues
- demonstrate insight into the role of knowledge in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the need for further knowledge and ongoing learning.

Independent project (degree project)

A requirement for the award of a Degree of Bachelor is completion by the student of an independent project (degree project) for at least 15 credits in the main field of study.

Specific learning outcomes for the Lund University Biomedicine programme

For a Degree of Bachelor of Science specialising in Biomedicine the students shall be able to

- explain the basic processes of life at the levels of chemistry, biochemistry, genetics, cells, organisms and populations,
- use scientific terminology to explain the origin of disease at the levels of molecules, cells, organisms and populations,
- apply knowledge of biomedicine to solve medical problems with regard to causes, mechanisms, diagnosis and treatment,
- assess original research articles and review articles in the field of biomedicine,
- apply their knowledge to plan and, using laboratory methods, execute a minor research and development project in biomedicine, and use relevant statistical methods to report and analyse it,
- communicate biomedical research in speech and writing, with solid support and methods established within the discipline,
- lead or cooperate with different professionals within the field of biomedicine and respectfully consider and assess their views and constructively offer their own views, and
- communicate and apply biomedical knowledge in public debates including sustainable development and equal opportunities

Course information

The Bachelor of Science specialising in Biomedicine consists of six semesters of first-cycle studies primarily conducted as student-centred learning. The first year includes courses in cell biology and chemistry, genetics and current methods to understand how health and illness are determined by inheritance and environment in a broad perspective. This is followed by the study of cells in their environment and how interactions with the environment can lead to serious diseases. The second year focuses on the development of human biology from the differentiation of stem cells to the creation of the nervous system out of nerve cells, physiological homeostasis and the role of the immune system in relation to health and disease. Furthermore, the year includes study of the pathogenicity of infectious agents, drug discovery and the treatment of common diseases. The third year focuses on translational and molecular medicine, on the occurrence of medical needs in society and how biomedical knowledge and skills can respond to these needs in the future. The year concludes with applied studies, including the drafting of a research programme, obtaining funding and ethical approval for the programme, and finally executing a 20-week project, preferably at a biomedical research lab, which is to be reported in writing and orally defended at a review seminar.

All semesters include training in laboratory techniques and other practical skills. Already in the first year, students will apply their biomedical knowledge to the planning, execution and reporting of research in scientific texts in biomedicine. Research communication and the ability to provide and receive feedback are practised on a regular basis and in conjunction with scientific writing and group exercises. Throughout the programme, students receive training in adopting a scientific approach to opinion-makers and the media with regard to the field of biomedicine. The ability to lead and participate in teamwork is a major component of the programme, as well as the ability to evaluate progress.

See attatchment MGBIM-Schematic-structure-spring-2024.pdf

Degree

Degree titles

Degree of Bachelor of Medical Science
Main field of study: Biomedicine
Medicine kandidatexamen
Huvudområde: Biomedicin

For the degree of Bachelor of Medical Science specialising in Biomedicine, students must complete 180 credits in the main field of biomedicine. At least 30 of the credits must be from an independent project in the programme.

Entry requirements and selection method

Entry requirements

General requirements and studies equivalent to Swedish Upper Secondary School courses Biology 2/Biology level 2, Chemistry 2/Chemistry level 2 and Mathematics 4 (or older course Mathematics D)/Mathematics further level 2

Selection method

Seats are allocated according to: The general average (GPA) of your higher secondary school leaving certificate: 66 %, The Swedish national university aptitude test: 34 %. The University board has decided that applicants with equal merits (in the GPA group) should be separated by the use of a valid result from the Swedish national university aptitude test.

FACULTY OF MEDICINE

Bachelor's Programme in Biomedicine (180 credits)

Course overview, applies from spring semester 2024

