Course syllabus for

Circulation, Metabolism and Endocrinology, 6 credits

Cirkulation, metabolism och endokrinologi, 6 hp
This course syllabus is valid from autumn 2022.

Course code	4BI127
Course name	Circulation, Metabolism and Endocrinology
Credits	6 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Biomedicine
Level	AV - Second cycle
Grading scale	Pass, Fail
Department	Department of Medicine, Huddinge
Participating institutions	• Department of Molecular Medicine and Surgery
Decided by	Programme committee for study programmes in biomedicine
Decision date	2022-09-23
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 objective of the course is to develop knowledge in the field of metabolism, endocrinology, and cardiovascular biology and disease using a translational approach. The student will be introduced to basic and clinical aspects as well as the most advanced technologies in the field.

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

Regarding knowledge and understanding

- demonstrate knowledge of endocrine systems, metabolism, cardiovascular biology and disease, including the role played by specific cell types,

- demonstrate knowledge of methodologies used to study molecular and physiological aspects of pathologies related to circulation, metabolism and endocrinology,

Regarding competence and skills

- integrate and relate mechanisms of metabolic regulation in different tissues at a molecular level with the pathologies caused by disruptions of these processes;
- discuss different aspects of vessel biology linked to cardiovascular pathophysiology;
- compare, evaluate and select appropriate methodologies for a specific research question in the areas of circulation, metabolism and endocrinology.

Regarding judgement and approach

- demonstrate awareness of ethical aspects in the research area of endocrinology, metabolism and circulation as well as in the prevention and treatment of metabolic and cardiovascular disorders,
- demonstrate insight into the possibilities and limitations of research in the field of metabolism endocrinology and circulation, its role in society and the responsibility of the individual for how it is used.

Content

The course consists of several modules within the area of endocrinology, metabolism, cardiovascular biology and disease. The course also contains practical training sessions in experimental and translational techniques used in the study of metabolic and endocrine as well as cardiovascular disorders

Teaching methods

Teaching will be in the form of lectures given by experts in the field, seminars (including mini-symposia with external speakers), group-based work, literature studies, laboratory sessions and demonstrations. Group-based and/or individual assignments will be given and will be presented as written reports and/or oral presentations. Results from practical methodological sessions will be presented and critically analysed during mentor-assisted group discussions.

Examination

Examination is performed at the end of each module and consists of oral and/or written assignments. Examination format will be communicated at the latest at the start of each module. The grading scale is fail/pass (U/G). To pass the entire course, a student must obtain the grade of pass (G) for all modules in the course.

Compulsory participation
Seminars, group work, laboratory sessions and demonstrations are compulsory according to information provided by each module. 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 has 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.

Oral evaluation in the form of course council meetings will be carried out during the course.

Literature and other teaching aids

Course literature comprises scientific papers and material handed out during the course.