



**Karolinska  
Institutet**

Course syllabus for

# **General Anatomy and Physiology, 9 credits**

Allmän anatomi och fysiologi, 9 hp

This course syllabus is valid from autumn 2019.

Please note that the course syllabus is available in the following versions:

Autumn2019 , [Autumn2021](#) , [Autumn2022](#)

Course code	1OP067
Course name	General Anatomy and Physiology
Credits	9 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	GX - First cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Clinical Neuroscience
Participating institutions	<ul style="list-style-type: none"><li>• Department of Physiology and Pharmacology</li><li>• Department of Neuroscience</li></ul>
Decided by	Education committee CNS
Decision date	2019-04-10
Course syllabus valid from	Autumn 2019

## **Specific entry requirements**

Natural sciences 2 (can be certified by Biology 1, Physics 1a / Physics 1b1 + 1b2, Chemistry 1), Mathematics 2a / 2b / 2c. Or: Natural Sciences B (can be certified by Biology A, Physics A, Chemistry A), Mathematics B.

## **Objectives**

After the course, the student should be able to

- (1) describe the main features in the structure of the cells, the tissues and the central nervous system in man,
- (2) describe the relationship between structure and function with respect to the cells, the tissues and the central nervous system
- (3) describe and identify the most important anatomical structures in the head and their relationships
- (4) describe the connection between the structure of the head, and common diseases in ear, nose and throat

- (5) describe the basic functions of the cell and its electric properties,
- (6) describe the function of the muscles and the function of the nervous system with regard to motor function, sensory functions, and autonomous and higher brain functions, respectively,
- (7) describe the physiology of circulatory and respiratory organs,
- (8) describe how the kidneys control acid/base balance and fluid balance
- (9) describe how the endocrine system of the body functions
- (10) describe the function of the gastrointestinal canal.

## Content

The course comprises

- (a) the structure of the cell at the microscopical level,
- (b) the body tissues with an emphasis on the nerve tissues,
- (c) the macroscopic structure of the central nervous system and the structure and function of the systems that are responsibility for different sensory functions apart from vision,
- (d) the anatomy of the head (the skull, the surface anatomy of the head, the vessels of the head and innervation and nose -/the mouth and throat),
- (e) the basic function and electric properties of the cell. This knowledge constitutes the basis for understanding the function of the nervous system in the following sections: muscle physiology and motor function, sensory and higher brain functions.
- (f) the autonomous nervous system and the endocrine systems of the body,
- (g) the areas of heart and circulation, respiration, kidney physiology including acid-base and fluid balance, and digestion.

The course is divided in two modules.

### General Anatomy, 4.5 hp

Grading scale: VU

Part 1 includes content a to d, attendance at compulsory parts and theoretical understanding of the course contents.

### General Physiology, 4.5 hp

Grading scale: VU

Part 2 includes content e to g, attendance at compulsory parts and theoretical understanding of the course contents.

## Teaching methods

The course includes self-studies, demonstrations, group assignments, laboratory sessions, theoretical overviews (in the form of lectures, seminars, cases and/or practical exercises).

Attendance is compulsory at laboratory sessions, group assignments and demonstrations.

The examiner assesses if, and how, absence from compulsory parts can be compensated. Study results cannot be reported until the student has participated in compulsory course elements or compensated for any absence in accordance with instructions from the examiner. Absence from a mandatory education element could mean that the student can not do the part until the next time the course is offered.

## Examination

The module *General anatomy* assesses the aims 1-4. Compulsory participation applies at laboratory sessions, group assignments and demonstrations. The module is assessed through written examination and compulsory laboratory sessions, group assignments and demonstrations. Each module of the course is graded according to the scale Fail/Pass/Pass with distinction. Re-examination may take place orally.

The module *General physiology* assesses the aims 5-10. Compulsory participation applies at laboratory sessions, group assignments and demonstrations. The module is assessed through written examination and compulsory laboratory sessions, group assignments and demonstrations. The module is graded according to the scale Fail/Pass/Pass with distinction. Re-examination may take place orally.

The entire course is graded according to the scale Fail/Pass/Pass with distinction. The grade Pass on the entire course requires Pass on both modules. Pass with distinction requires Pass with distinction on both modules.

### **Limitation of number of tests or practical training sessions**

Student who do not pass the regular examination occasion is entitled to re-sit the examination at five more occasions. If the student has carried out six failed examinations no additional examination will be given. As an examination occasion, the times are counted when the student has participated in the same test. Submission of blank exam is counted as examination. In case a student is registered for an examination but does not attend, this is not regarded 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' 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 knowledge, skills and attitudes may not be changed, removed or reduced.

## **Transitional provisions**

If the course is closed down or undergoes major changes, students who have not completed the course are given the possibility, during four semesters from the date when the student first registered in the course, to be examined according to the current syllabus. After four semesters, the student is examined according to the new syllabus.

## **Other directives**

Course evaluation takes place according to guidelines established by Karolinska Institutet.

Some teaching may be in English.

## **Literature and other teaching aids**

### ***Mandatory literature***

*Aldskogius, Håkan; Rydqvist, Bo*

**Den friska människan : anatomi och fysiologi**

Första upplagan : Stockholm : Liber, [2018] - 476 sidor

ISBN:9789147105694 LIBRIS-ID:21774685

[Library search](#)

### ***Recommended literature***

**Fysiologi**

*Lännergren, Jan; Westerblad, Håkan; Ulfendahl, Mats; Lundeberg, Thomas*

Sjätte upplagan : Lund : Studentlitteratur, [2017] - 397 sidor

ISBN:9789144114859 LIBRIS-ID:19922136

[Library search](#)

**Halsens och huvudets deskriptiva och topografiska anatomi**

*Albiin, Nils*

Lund : Studentlitt., 1982 - 164, [9] s.

ISBN:91-44-17811-5 LIBRIS-ID:7276881

[Library search](#)