



**Karolinska
Institutet**

Course syllabus for

Anatomy and physiology in healthy humans, 12 credits

Den friska människans anatomi och fysiologi, 12 hp

This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

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

[Autumn2010](#) , [Spring2011](#) , [Spring2016](#) , [Spring2017](#)

Course code	1SJ000
Course name	Anatomy and physiology in healthy humans
Credits	12 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Medicine
Level	G1 - First cycle 1
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Laboratory Medicine
Decided by	Programnämnd 1
Decision date	2010-05-11
Revised by	Education committee NVS
Last revision	2016-11-02
Course syllabus valid from	Spring 2017

Specific entry requirements

Admitted to the nursing programme. Specific entry requirements: Ma B, Sh A, Nk B (or Fy A, Ke A and Bi A).

Objectives

The aim of the course is that the student should acquire knowledge of the healthy man's anatomy and physiology to be able to plan and implement nursing based on scientific based knowledge of the structure and function of the human body.

Intended learning outcomes

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

- Name, point out anatomic structures and be able to use correct terminology for positions and different directions of the body
- Describe the structure of the human body on cell-, organs-, organ system- and organism level

- Account for the function of the human body on organs-, organ system- and organism level
- Describe the relationships between structure and function of the human body
- Explain how the different organ systems interact to maintain homeostasis
- Relate physiological examination methods to the function of the circulatory- and the respiratory organs

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

- carry out cardiopulmonary resuscitation (CPR)
- carry out pulse- and blood pressure measurement
- connect and carry out ECG registration
- register oxygen saturation in the blood with pulse oximeter
- account for spirometry measurements

Judgement ability and approach On completion of the course, the student should be able to:

- identify and discuss both ethical, gender- and socio-cultural aspects carrying out above described skills
- identify and discuss quality and patient security around above described skills
- reflect on how the concept health is connected to the healthy man's anatomy and physiology.

Content

The course is divided in three modules:

Module 1: Anatomy and physiology I 5 credits (Anatomy and Physiology I)

Module 2: Anatomy and physiology II 5.5 credits (Anatomy and Physiology II)

Module 3: Practical skills 1.5 credits (Practical skills)

Part 1 Anatomy and physiology I 5 credits In this part, the normal structure and function of the human body is studied, including changes over the life cycle. The course includes basic cell biology, physiology and anatomy and medical terminology. In the course, evidence-based medicine and a scientific approach is introduced as a basis to understand the nursing need of people and to be able to plan and carry out nursing.

Basic cell biology, biochemistry and genetics Structure, function and cooperation between the organ of the body:

- the nervous system
- the sensory organs
- The circulatory system
- The respiratory system

Part 2 Anatomy and physiology II 5.5 credits In this part, the normal structure and function of the human body is studied, including changes over the life cycle. In the course, evidence-based medicine and a scientific approach is introduced as a basis to understand the nursing need of people and to be able to plan and carry out nursing.

- The endocrine system
- gastrointestinal system
- kidneys and urinary tract
- the musculoskeletal system
- the skin
- the reproduction
- cooperation between organ systems to maintain homeostasis

Part 3 Practical skills 1.5 credits In this part, CPR and physiological examination methods are trained such as ECG, oxygen saturation, pulse- and blood pressure measurement and spirometry

Anatomy and Physiology I, 5.0 hp

Grading scale: VU

In this part, the normal structure and function of the human body is studied, including changes over the

life cycle. The course includes basic cell biology, physiology and anatomy and medical terminology. In the course, evidence-based medicine and a scientific approach is introduced as a basis to understand the nursing need of people and to be able to plan and carry out nursing.

Basic cell biology, biochemistry and genetics Structure, function and cooperation between the organ of the body:

- the nervous system
- the sensory organs
- The circulatory system
- The respiratory system

Anatomy and Physiology II, 5.5 hp

Grading scale: VU

In this part, the normal structure and function of the human body is studied, including changes over the life cycle. In the course, evidence-based medicine and a scientific approach is introduced as a basis to understand the nursing need of people and to be able to plan and carry out nursing.

- The endocrine system
- gastrointestinal system
- kidneys and urinary tract
- the musculoskeletal system
- the skin
- the reproduction
- cooperation between organ systems to maintain homeostasis

Practical skills, 1.5 hp

Grading scale: VU

In this part, CPR and physiological examination methods are trained such as ECG, oxygen saturation, pulse- and blood pressure measurement and spirometry.

Teaching methods

The working methods intend to support the student's learning and to train a scientific approach which takes place through active knowledge acquisition problem-solving and critical reflection. In this course, lectures, seminars, laboratory sessions, practical skills training and literature studies are used. Participation in specified seminars, laboratory sessions and practical skills training are compulsory.

The distance education is IT-based and is based on independent and collaborative learning. Different working methods such as individual study assignments, work in groups, virtual discussions and seminars and lectures occur, as well as laboratory sessions and practical skills training. Teaching support are given via IT-based learning management system.

Examination

Module 1: be examined through individual written examination and group examination.

Module 2: be examined through individual written examination.

Module 3: be examined through individual assessment and practical test according to evaluation form

To pass the course, it is required that the expected learning outcomes are satisfied which implies passed results in part 1, 2 and 3 and participation in compulsory parts such as seminars and group examinations. To pass the course with distinction requires the results of the written examination both in part 1 and part 2 as passed with distinction and passed results of part 3 and participation in compulsory parts. Grades are assigned by the examiner.

In case of absence from compulsory parts, compensation in consultation with course coordinator takes place.

Students who do not pass a regular examination are entitled to re-sit the examination on five more occasions. Student who lacks passed results after three implemented examinations can however be offered to go parts or the whole course once more if places are available.

If the student has failed six examinations/tests, no additional examinations are given.

Submission of a blank exam paper is regarded as an examination. In case a student is registered for an examination but does not attend, this is not regarded as an examination. A home examination that has been opened via the learning management system counts as an examination session even if the examination is not submitted. Late submissions of examinations are not accepted. Students who have not submitted on time are referred to re-examination.

Transitional provisions

For a course that has ceased or gone through larger changes or where the reading list has been changed considerably should be given additional test (excluding regular test) on the earlier contents or the previous literature during a time of a year from the date the change took place.

Other directives

Course evaluation takes place in accordance with the guidelines established by the Board of Education.

Literature and other teaching aids

Sand, Olav

Människokroppen : fysiologi och anatomi

2. uppl. : Stockholm : Liber, 2007 - 544 s.

ISBN:9147084359 (inb.) LIBRIS-ID:10455726

[Library search](#)

Atlas över människokroppen

Vigué, Jordi; Martín Orte, Emilio; Ferrón, Miquel; Ferrón, Myriam

Dunder, Kristina

2. uppl. : Stockholm : Liber, 2012 - 164 s.

ISBN:9789147105878 (inb.) LIBRIS-ID:12744910

[Library search](#)

Lindskog, Bengt I.; Frank, Urban

Medicinsk miniordbok

6. uppl. : Stockholm : Norstedts akademiska förlag, 2005 - 508 s.

ISBN:91-7227-440-9 LIBRIS-ID:9863879

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