



**Karolinska
Institutet**

Course syllabus for

Physiology 1 - Movement, 3 credits

Fysiologi 1 - Tema människan i rörelse, 3 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:

Autumn2007 , Autumn2008

Course code	1SY010
Course name	Physiology 1 - Movement
Credits	3 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 Physiology and Pharmacology
Decided by	Programnämnden för sjukgymnastprogrammet
Decision date	2007-05-23
Revised by	Education committee NVS
Last revision	2020-02-14
Course syllabus valid from	Autumn 2008

Specific entry requirements

Standardised admission requirements F.1.2.

Objectives

The aim of the course is to introduce the subject physiology with a specialisation in neurophysiology, muscle physiology, motor function and to give students an opportunity to develop basic theoretical knowledge in physiology to become part of an integrated clinical thinking. The course also aims at stimulating a reflecting and scientific attitude.

Learning outcomes

At the end of the course, the student should : be able to describe and understand the physiological function - in different sensory systems and in the autonomous nervous system; in various types of muscle cells; concerning muscle function, motor functions of the brain stem and the cerebellum and higher functions such as memory and sleep, be able to describe/account for/explain concepts in the various component parts and relate them to a physiological context, have developed an understanding of how the body can provide, on the basis of future impressions to our a consciousness, how the body's

own pain relieving can be activated through sensory stimulation, how the body can utilise motor programs, how a sensory motor integration may be done, how memory functions and sleep patterns may be affected by pain and stress

Content

Physiology 1 comprises teaching about:

- * The physiology of the neuron - osmosis, filtration, diffusion, onset of rest and action potentials
 - * Sensory physiology - general principles, feeling, vision, hearing, smell, taste, the vestibular nerve;
- Introduction to pain physiology
- * Autonomous nervous system - function in peripheral and central parts, importance for our survival
 - * Muscle physiology, muscle fibres, muscle receptor, function in skeleton, cardiac and smooth musculature; sarcotubular system, activation and contraction process, the energy system and metabolism of the muscle, regulation of muscle force, muscle fatigue
 - * Reflectors and motor control
 - * The higher functions of the nervous system - emotions, wakefulness and sleep, interpretation functions, speech and writing ability, learning and memory, consolidation, abstract thinking and consciousness.

The course is included in the theme Man in motion of the Study Programme in Physiotherapy, and is given directly after the course Anatomy - Theme, man in motion, 7.5 HE credits.

Teaching methods

Teaching is based on lectures, own work with study questions and a laboratory session. The laboratory session under the heading of reflectors and sensory functions aims at carrying out practical experiments based on theoretical parts just treated during the lectures. As a support for the implementation of the laboratory programme, a laboratory compendium is used.

In addition to this, the student is expected to acquire a large part of the knowledge through theoretical self-study.

Examination

The course is examined according to the following:

written examination. Grading scale: Pass with distinction/Pass/Fail

Compulsory participation for a pass grade on a course is:

participation in laboratory session

Information about complementary assignment, if attendance in a regular laboratory session is not possible, is given by the course coordinator .

In case of failure in the regular examination, the student is given the opportunity to return to a make-up examination during the same semester. After that, the student has the possibility to be examined on two occasions each semester in the following semesters. The student may sit, all in all, six examinations in the subject.

Transitional provisions

The course has been cancelled and was offered for the last time in the spring semester of 2011.

Examination will be provided until the spring semester of 2021 for students who have not completed the course

Other directives

Course evaluation

Course evaluation is conducted according to the guidelines established by the Board of Education at KI, and based on established evaluation routines within the programme. During the course, the students are encouraged to communicate their views on the course contents etc Furthermore an opportunity for an oral course council meeting is provided, where a representative from each study group is able to present views to the course director or module coordinator.

Literature and other teaching aids

Fysiologi

Lännergren, Jan

3., [uppdaterade] uppl. : Lund : Studentlitteratur, 2005 - 310 s.

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