Course syllabus for

Examination - Physiology 2, 7.5 credits

Tema undersökning - Fysiologi 2, 7.5 hp
This course syllabus is valid from autumn 2017.
Please note that the course syllabus is available in the following versions:
Autumn2015 , Spring2017 , Autumn2017 , Spring2018 , Autumn2018

Course code	1FY014
Course name	Examination - Physiology 2
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	GX - First cycle
Grading scale	Pass, Fail
Department	Department of Physiology and Pharmacology
Decided by	Programme Committee 3
Decision date	2015-05-04
Revised by	Education committee NVS
Last revision	2017-05-12
Course syllabus valid from	Autumn 2017

Specific entry requirements

Physical Education 1, Mathematics 2a / 2b / 2c, Natural Sciences 2, Social Sciences 1b / 1a1+1a2 (field specific entry requirements A15). Or: Physical Education A, Mathematics B, Natural Sciences B, Social Sciences A (field specific entry requirements 17).

Objectives

The aim of the course is to introduce the subject physiology with a specialisation in the physiology of the internal organ systems, environmental physiology, exercise physiology, aging physiology, pharmacology and to provide the students an opportunity to develop basic theoretical knowledge in physiology to be able to become part of an integrated clinical thinking. The course also aims at stimulating a scientific attitude.

Learning outcomes
At the end of the course, the student should : be able to describe and understand - physiological functions in the internal organ systems, i. e. how the body can regulate functions concerning circulation, respiration, digestion, nutrition, fluid regulation and hormonal release; basic parts of pharmacology, be able to describe/account for/explain concepts in the different component parts and relate them to a

physiological context, have developed an understanding of how - functions in the different internal organ systems can be adapted in connection with various external demands, work and stress; the functions of the body are influenced by the normal aging; the body is influenced by pharmacological intervention.

Content

Physiology 2 may be summarised to include teaching of the function of the internal organ systems and introduction to pharmacology which includes:

- Blood - the components of the blood, hemostasis
- Heart and circulation - the conduction system and pumping of the heart, valvular diseases of the heart, methods to examine heart function, hemo-dynamics, blood pressure and blood pressure regulation, the lymphatic system, circulatory adaptation
- Respiration - respiratory mechanics, lung volumes, gas exchange, gas transport, respiratory regulation
- Work and environmental physiology - adaptation to various temperatures, high height, diving, submaximal and maximum work
- Introduction to exercise physiology - the energy system of the muscle, fitness training, strength training
- Endocrinology
- Digestion and nutrition
- Immunology
- Kidney function and fluid balance
- Pharmacological basic principles
- Stress The physiology of aging

The course is given in direct connection to the course Theme Examination - Anatomy, 7,5 credits.

Teaching methods

The teaching is based on a problem-oriented and collaborative approach to learning in which the tasks provide opportunities for the student to take active responsibility for their learning. The used teaching methods are lectures, own work with study questions and laboratory sessions. The laboratory sessions in respiration, circulation, submaximal and maximal test of oxygen, absorption ability, lactate-based training and test, and blood glucose regulation in work, aim 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.

Compulsory participation for a pass grade on a course is: participation in laboratory session.

The course coordinator decides whether, and if so how, absence from compulsory course elements can be made up. 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 course coordinator. Absence from a compulsory course element could mean that the student can not retake the element until the next time the course is offered.

Examination

The course is examined according to the following: written examination.

Students who do not pass a regular examination are entitled to re-sit the examination on five more occasions. If the student has failed six examinations/tests, no additional examination is given. Each occasion the student participates in the same test counts as an examination. 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. Late submissions of examinations are not accepted. Students who have not submitted on time are referred to re-examination.

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.

Transitional provisions

Examination will be provided during one year after a close-down of the course or a new syllabus.

Other directives

Course evaluation is conducted according to the guidelines established by the Board of Education at KI.

Literature and other teaching aids

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

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