Course syllabus for

Integrative Physiology, 15 credits

Integrativ fysiologi, 15 hp
This course syllabus is valid from autumn 2008.
Please note that the course syllabus is available in the following versions:
Autumn2008 , Autumn2011 , Autumn2013

Course code	1BI006
Course name	Integrative Physiology
Credits	15 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Biomedicine
Level	G2 - First cycle 2
Grading scale	Excellent, Very good, Good, Satisfactory, Sufficient, Fail, Fail
Department	Department of Physiology and Pharmacology
Decided by	Programnämnden för biomedicinprogrammen
Decision date	2008-08-28
Revised by	Programnämnd 7
Last revision	2010-05-21
Course syllabus valid from	Autumn 2008

Specific entry requirements

At least grade E at the courses in Introduction to biomedical science (1BI001) and General and Organic Chemistry (1BI000), and at least grade G (pass) at part 1 and 2, Basal metabolism and laborations (3+2 credits) at the course Medical biochemistry (1BI002), and part 1, Cell biology (6ECTS) at the course Cell biology and genetics (1BI003).

Objectives

After completing the course, the student should be able to: -describe the normal physiological state and homeostasis mechanisms in the human body. -explain how selected diseases develop, how they are diagnosed and treated. -account for various organ systems in the body. -describe the functions of the various organ systems in the body. -provide a general account for how the various organ systems are regulated (eg, muscle contraction, cardiac output, blood pressure, hormone release). -provide a general account for how intracellular signaling occurs in various specialized cells. -account for basic anatomical structures in the various organ systems. -describe how the various organ systems communicate with each other. -find relevant original and overview articles dealing with specific topics in physiology and consolidate these in the form of a presentation.

Content

The course focuses on physiological principles and regulatory mechanisms within the following areas: membranes and nerves; autonomic nervous system; muscle (skeletal, heart, and smooth muscle); heart and circulation; respiration; kidney, fluid and electrolyte balance, acid-base control; gastrointestinal tract; endocrinology; regulation of body temperature; exercise physiology; environmental physiology. The course is divided into three parts that are examined individually: Part one. Integration of practical features, 4 credits. Part time exam, laboratory practicals and seminars. Part two. Project work, 3 credits. The project work involves searching, analyzing and summarizing current literature, ending in an oral presentation. Part three. Integration of the course contents, 8 credits.

Integration of practical features, 4.0 hp

Grading scale: UG

Part time exam, laboratory practicals and seminars.

Project work, 3.0 hp

Grading scale: UG

The project work involves searching, analysing and summarising current literature, ending in an oral presentation.

Integration of the course contents, 8.0 hp

Grading scale: AF

Teaching methods

The course consists of lectures, laboratory practicals, seminar work and a project that serve to describe and illustrate the functional characteristics of the different organ systems.

Examination

The exams consist of: Part one, integration of practical features, is examined by an oral quiz that covers the material given in the first part of the course is given and graded as pass/fail. The problem presentations are graded as pass/fail. Part two, the project work, is presented orally and graded as pass/fail. Part three, integration of the course contents, is examined by a written exam graded as F/Fx/E/D/C/B/A. The course grade is based on the grade of part 3. Compulsary participation: Laboratory practicals and seminars are compulsory. The course director determines if it is possible and if so how the student can compensate possible absence from compulsory parts. Before the student has participated in compulsory parts, or compensated for absence in accordance with the course director's instructions, the current part is not registered in LADOK (student registry). Limitation of number of test opportunities: A student who does not pass the examination on the first occasion is offered a maximum of five additional opportunities to participate in the examination. If a student has not passed the examination after a total of four attempts then it is recommended that the student retake the whole course at the next opportunity. Following this the student is permitted to participate in the examination on another two occasions. A student who fails the examination on six occasions is not permitted to participate in the examination again or to retake the course. Participation in an examination is defined as an occasion on which a student attends an examination, even if the student submits a blank examination paper. If a student has registered to sit an examination, but does not attend the examination, this is not defined as participation in the examination.

Transitional provisions

After each course occasion there will be at least six occasions for the examination within a 2-year period from the end of the course.

Other directives

The course will be evaluated in accordance with the guidelines established by the Board of Education. The course language is English.

Literature and other teaching aids

Vander's Human Physiology : the mechanisms of body function
Widmaier, Eric P.; Raff, Hershel; Strang, Kevin T.; Vander, Arthur J.

11. ed. : Boston : McGraw-Hill Education, c2008 - xxviii, 770 p.
ISBN:978-0-07-128366-3 LIBRIS-ID:10637341
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