



**Karolinska
Institutet**

Course syllabus for

Exercise in the management and prevention of metabolic diseases, 1.5 credits

Träning som ett medel för att förebygga och behandla metabola sjukdomar, 1.5 hp

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

Course code	4BI040
Course name	Exercise in the management and prevention of metabolic diseases
Credits	1.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	AV - Second cycle
Grading scale	Pass, Fail
Department	Department of Molecular Medicine and Surgery
Decided by	Programnämnden för biomedicinprogrammen
Decision date	2009-02-03
Course syllabus valid from	Spring 2009

Specific entry requirements

At least grade E at all courses on term 1 and at least 10 ECTS from courses at term 2.

Objectives

Participants will be able to explain the health-related benefits of exercise from a physiological perspective.

Content

The aim of this course is to address the current understanding of the role of exercise in the prevention and treatment of diseases associated with an increasingly aging sedentary population. Lectures will cover the metabolic, physiological and molecular responses to exercise in health and disease. A current understanding of the basic molecular and cellular events governing the acute and chronic exercise response will be provided. Adaptation of skeletal and cardiac muscle and the cardiovascular system to exercise will be considered. Topics include strategies for exercise prescription in various clinical situations including: the care and prevention of congestive heart failure and other cardiac disorders, diabetes, obesity, musculoskeletal disorders, and frailty.

Teaching methods

This course will be composed of interactive seminars, lectures, laboratory practicals, group work, group presentations and discussion.

Examination

Students will be assessed by their group presentation (10 min). In addition to this, each student will make a written summary of the specific research project in which he/she was participating. Laboratory practicals and group works are compulsory. Students that are not able to attend to a part of the course, as a compensation, could do a self-study and write an essay on the topic(s) that they have missed.

Compulsory attendance: A student who does not pass the examination on the first occasion is offered a maximum of five additional opportunities to sit 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 sit the examination on another two occasions. A student who fails the examination on six occasions is not permitted to sit 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 6 occasions for the examination within a 2-year period from the end of the course.

Other directives

The course language is English.

Literature and other teaching aids

There is no literature specified for this course. Please contact the department for more information.