



HL1007 Medical Engineering, Basic Course 6.0 credits

Medicinsk teknik, grundkurs

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for HL1007 valid from Autumn 2011

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Medical Engineering, Technology

Specific prerequisites

General eligibility for university studies in Sweden, i.e. completed upper secondary education including documented proficiency in Swedish and English. and passed 120 cr. of studies in science and/or technology at university level. Exemption from Swedish when the course is given in English.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The course gives an introduction to medical diagnostics and therapy as well as an understanding of how the physician works. The objective of the course is to give an introduction to medical terminology, physiological and medical principles and medical engineering methods for diagnosis and therapy. After the course, the students should be able to understand medical and medical engineering problems and communicate with physicians, medical engineers and representatives from research and development as well as industry.

Course contents

The most important concepts and fundamentals in: medical terminology, medical physiology, anatomy and histology, pathology, diagnosis and therapy.

Medical and technical aspects on technical methods used in physical diagnosis, cardiopulmonary physiology, clinical neurophysiology, diagnostic radiology, internal medicine and treatment, surgery, intensive care, obstetrics, radiotherapy and medical engineering industry and market.

Course literature

För svenskspråkiga studenter: "Jacobsons Medicin och Teknik", Redaktörer Maria Lindén & P. Åke Öberg, Studentlitteratur, 2006. ISBN 91-44-04760-6

För engelskspråkiga studenter: "Medical Devices: Use and Safety", Bertil Jacobson & Alan Murray, Churchill Livingstone 2007, ISBN-13 978-0-443-10259-2 samt kompletterande material sålt av kursgivande avdelning.

Examination

- TEN1 - Examination, 6.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.