



HL1004 Clinical Engineering 7.5 credits

Medicinteknisk verksamhet

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

Establishment

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Basic medicine corresponding to the course: Anatomy, Physiology, and Pathology, 6L2870, and knowledge corresponding to the courses: Engineering and Information Skills, 6L2900, Electronics I, 6L3002, and Telecommunication, 6L3004.

Language of instruction

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

Intended learning outcomes

To supply relevant knowledge for working with medical devices in trade, industry, or public sector.

Course contents

The course is organized under five headings:

Organization of clinical engineering

We discuss the handling of medical devices in hospitals, the organization of the county council, quality assessment/development in medical care, and medical device companies.

Regulations and responsibilities

We examine the regulatory framework for medical devices and how authorities and organizations are working with medical devices. Risk analysis, accidents, and responsibility are also addressed here.

Technical safety and standardization

This part concerns the use of standards, medical device construction requirements and documentation, and also EU harmonization of standards.

Public purchasing of medical devices

We learn how to work with the Public Procurement Act and other demands from the EU.

Maintenance of medical devices

We learn basic maintenance and management of medical equipment.

Teaching activities: Lectures, laboratory lessons, study visits, demonstrations, and project work.

Course literature

Jacobson, Bertil: Teknik i praktisk sjukvård, Studentlitteratur 2003

Ohlson, Mats & Carlsson, Lars: Säker hantering av medicintekniska produkter, SIS Forum 2004

Course folder

Hand-outs from lecturers.

Examination

- RED1 - Account, 7.5 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.

Other requirements for final grade

Passed laboratory lessons, seminars, and final written examination (RED1; 5p).

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.