



BB1020 Cell Biology with Immunology 6.0 credits

Cellbiologi med immunologi

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

Establishment

Course syllabus for BB1020 valid from Autumn 2007

Grading scale

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

Education cycle

First cycle

Main field of study

Technology, Biotechnology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

The course aims to give introductory theoretical knowledge of the biology of the cell including structure, function and communication. The course also aims to give a basic understanding of the components and function of the immune system.

Course contents

Cell communication and cell cycle, cell renewal, differentiation and apoptosis. Cell types and tissues. Components of the immune system and their roles in defense, cell types and tissues. Development of B- and T-lymphocytes. Innate and adaptive immunity. Clonal selection. Generation of T- and B-cell diversity. Antigen recognition by T- lymphocytes and T-cell mediated immunity. Humoral immunity (mediated by B cells and antibodies). The body's defense against infection. Complement. MHC, antibodies, T-cell receptors (structure, function). Fc-receptors. Cell-communication. Failures of the immune system: Autoimmunity, allergy.

Course literature

Cellbiology:

The Cell - A Molecular Approach, third edition (2004): Cooper and Hausman, American Society for Microbiology / Sinauer Associates, Inc., Engelsk text ISBN 0-87893-214-3 (0-87893-215-1).

Immunology:

The Immune system, 2nd edition av Peter Parham. 2005, Garland Publishing, London, Engelsk text. ISBN 0-8153-4093-1.

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.

Other requirements for final grade

Written examination (TEN1; 6 credits, grading scale A-F).

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.