Course syllabus for

Cell- and molecular biology including embryology, 7.5 credits

Cell- och molekylärbiologi inkl embryologi, 7.5 hp
This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.
Please note that the course syllabus is available in the following versions:
Autumn2007 , Autumn2013 , Spring2015 , Autumn2016

Course code	2TL006
Course name	Cell- and molecular biology including embryology
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	GX - First cycle
Grading scale	Pass, Fail
Department	Department of Dental Medicine
Decided by	Styrelsen för utbildning/Programnämnden för tandläkarprogrammet
Decision date	2007-05-14
Revised by	Programme Committee 10
Last revision	2014-10-20
Course syllabus valid from	Spring 2015

Specific entry requirements

Biology 2, Physics 2, Chemistry 2, Mathematics 4 (field specific entry requirements A13). Or: Biology B, Physics B, Chemistry B, Mathematics D (field specific entry requirements 13).

Objectives

After the course, the student should

- be able to explain terms and definitions within cell and molecular biology and embryology to such an extent that these can be related to and applied in the future studies
- be able to explain and account for the connection between reactions and processes in the organelles of the cell
- be able to explain and describe the dynamics in the genetic information flow and the consequences of disturbances in this flow
- be able to describe and explain the development of the embryo chronologically, with a focus on

the head and the throat, and be able to account for how disorders in the normal embryogenesis may cause developmental disabilities
- be able to reflect on and discuss the importance of the cell and molecular biology and embryology for the development in dental and medical research
- have theoretical knowledge about and be able to reflect on and discuss cell culture methodology and various DNA techniques, their possibilities and constraints

Content

The course consists of two parts:

Cell and molecular biology, 6 hp To facilitate the student's learning, lectures on the theoretical contents of the course are given. The student should also participate in the following compulsory seminars: The cell and its organelles, the genetic information flow, DNA technological methods and a compulsory laboratory session: Histological analysis of healthy versus carious teeth. **Embryology, 1.5 hp** The working methods of the course comprise lectures in embryology and carcinogenesis and individual assignment with study questions

Teaching methods

The working methods of the course are lectures, individual work with seminar assignments and study questions, seminars and a laboratory session.

The laboratory session and seminars are compulsory.

The course coordinator decides whether, and if so how, absence from compulsory course elements can be made up. Study results cannot be reported until the student has participated in compulsory course elements or compensated for any absence in accordance with instructions from the course coordinator. Absence from a compulsory course element could mean that the student can not retake the element until the next time the course is offered.

Examination

The examination is arranged through written examination, separately for each part.
To pass the course, attendance at compulsory parts and passed results of each part of the course are required.

Transitional provisions

If the course is closed down or undergoes major changes, examination under a previous literature list and learning outcomes will be offered no more than one academic year after the implementation of the revision/close-down.

Other directives

Limited number of examinations or practical training sessions
If the student's examination has not passed, the student gets 2 more examination opportunities. After that, the student is recommended to retake the course and is given 3 more examination opportunities. If the student has not passed after 6 trials, he/she has no more admission to the course. (HF chapter 6, section 11 a).

A course evaluation is carried out according to the guidelines established by the Board of education.

Literature and other teaching aids

Essential cell biology

Alberts, Bruce

3. ed. : New York : Garland Science, c2010 - xx, 731 s., A:60, G:23, I:28
ISBN:9780815341291 (hbk.) LIBRIS-ID:11436249
Library search

Mitchell, Barry; Sharma, R.

Embryology : an illustrated colour text

2. ed.. : Edinburgh : Churchill Livingstone, cop. 2009. - vii, 85 s.
ISBN:978-0-7020-3225-7 LIBRIS-ID:11587160
Library search