Course syllabus for

Tumor Biology, 9 credits

Tumörbiologi, 9 hp
This course syllabus is valid from autumn 2013.
Please note that the course syllabus is available in the following versions:
Autumn2011 , Autumn2013 , Autumn2014 , Autumn2015 , Autumn2016 , Autumn2019 , Autumn2020

Course code	4BI079
Course name	Tumor Biology
Credits	9 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Biomedicine
Level	AV - Second cycle
Grading scale	Pass, Fail
Department	Department of Microbiology, Tumor and Cell Biology
Decided by	Programnämnd 7
Decision date	2011-04-06
Revised by	Programnämnd 7
Last revision	2013-03-21
Course syllabus valid from	Autumn 2013

Specific entry requirements

At least the grade G (pass) on the courses Applied communication in biomedicine 1 including philosophy of science and bioethics, Applied communication in biomedicine 2, Frontiers in translational medicine, Laboratory animal science in theory and practice, and Biostatistics, within the Master's programme in Biomedicine.

Objectives

On completion of the course the student should:

- have obtained an overview of the cancer problem, the modern view on what cancer is, from basic to clinical perspective,
- understand the basic foundations in cancer biology and having obtained a certain ability to discuss and understand advanced problems in cancer biology,
- having obtained an insight in the most important problems that need to be solved regarding cancer biology, diagnostics, preventing measures, treatment and quality of life,
- be able to understand, analyse and criticise current strategies to utilise available information about cell cycle regulation, tumor suppressors and oncogenes for development of new treatment forms,

- having obtained a thorough knowledge of the relation between cell death and cancer growth and the importance of cell death for tumour progression, metastase process and cancer therapy,
- having obtained an understanding of how tumour environment interacts with malignant cells to develop tumour tissue,
- be familiar with current research about cancer progenitor cells (or cancer stem cells),
- be able to discuss the process of metastasis,
- have understanding about known hereditary cancer syndromes, involved genes, how they were discovered, what is known of the mechanisms for tumour origin, what the current clinical routines are for these syndromes regarding genetic testing, counselling and preventing programs and available treatments for the individual.

Content

The course is divided in two parts:

Tumour Biology part 1, 5 hp Tumour Biology part 2, 4 hp

Teaching methods

The educational view is based on learning as an active research process. The course is an advanced course, and it is assumed that the student takes own responsibility to acquire knowledge. The teaching will take place in the form of expert lectures, seminars and group assignments led of researcher. Group - and/or independent assignments are included and are presented as written reports and oral presentations.

Examination

Tumour Biology part 1 is examined through oral and written assignments.
Tumour Biology part 2 is examined through oral and written assignments.

To achieve the grade Pass (G) on the course both parts must be passed.

Compulsory participation:
Course introductions, group assignments, seminars and demonstrations are compulsory. The course director assesses if and, in that case, how absence can be compensated. Before the student has participated in all compulsory parts or compensated absence in accordance with the course director's instructions, the student's results will not be registered in LADOK. Absence from a compulsory activity may result in that the student cannot compensate the absence until the next time the course is given.

Limited number of examinations or practical training sessions
Students who have not passed the regular examination are entitled to participate in five more examinations. If the student is not approved after four examinations, he/she is recommended to retake the course at the next regular course date, and may, after that, participate in two more examinations. If the student has failed six examinations/tests, no additional examination or new admission is provided.

The number of times that the student has participated in one and the same examination is regarded as an examination session. Submission of a blank examination is regarded as an examination. An examination, for which the student registered but not participated in, will not be counted as an examination.

Transitional provisions

After each course, there will be at least six occasions for examination within a two-year period after the end of the course.

Other directives

The course language is English.

Literature and other teaching aids

Course literature is scientific papers and material handouts out during the course.

One book is recommended covering the whole subject: Robert A. Weinberg. The Biology of Cancer (Garland Science, 2007).