



**Karolinska  
Institutet**

Course syllabus for

# **Tumour Biology, 6 credits**

Tumörbiologi, 6 hp

This course syllabus is valid from autumn 2022.

Course code	4BI123
Course name	Tumour Biology
Credits	6 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Biomedicine
Level	AV - Second cycle
Grading scale	Fail (U), pass (G) or pass with distinction (VG)
Department	Department of Microbiology, Tumor and Cell Biology
Decided by	Programme committee for study programmes in biomedicine
Decision date	2022-03-23
Course syllabus valid from	Autumn 2022

## **Specific entry requirements**

At least the grade G (Pass) for the courses Frontiers in Biomedicine, Applied Biostatistics, Bioinformatics, semester 1 elective course, Bioethics and Laboratory Animal Science, Applied Biomedical Communication and Professional Development, and registration for the course Frontiers in Biomedicine: Research Project 1, within the Master's Programme in Biomedicine.

## **Objectives**

The course will give a broad understanding of tumour biology; from fundamental mechanisms regulating tumour development, to screening and identifying genetic changes, treatment strategies, development of precision cancer medicine, and understanding the clinical perspective.

On completion of the course, the student should be able to:

Regarding knowledge and understanding

- Describe, define and demonstrate understanding of the basic principles in cancer biology
- Demonstrate specialised knowledge in mechanisms regulating tumour development and discuss how this can be used for precision cancer medicine and drug discovery,
- Compare and contrast different methods and model systems used in cancer research.

Regarding competence and skills

- Demonstrate the ability to critically and systematically integrate obtained knowledge to explain important problems that need to be solved regarding cancer biology,
- Demonstrate the ability to discuss and report the concepts of tumour biology, cancer research, and cancer treatment in both speech and writing.

Regarding judgement and approach

- Demonstrate the ability to make assessments in oncology research, on social and ethical issues in cancer treatment and to demonstrate awareness of ethical aspects of research and drug development work,
- Demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used.

## Content

The course consists of several modules within the areas of tumour biology and oncology.

## Teaching methods

The teaching will take place in the form of expert lectures, seminars and group assignments led by researchers. Group and individual assignments are included and are presented as written reports and oral presentations.

## Examination

Examination is performed at the end of each module and consists of oral and/or written assignments. Examination format will be communicated at the latest at the start of each module. The grading scale is fail/pass (U/G). To pass the entire course, a student must obtain the grade of pass (G) for all modules in the course.

### Compulsory participation

Seminars, group work and demonstrations are compulsory according to information provided by each module. The course examiner assesses if and, in that case, how absence from compulsory components can be compensated for. A student's study results cannot be finalised/registered until the student has participated in the compulsory components or compensated for their absence in accordance with the examiner's instructions. Absence from a compulsory component may mean that the student cannot compensate for absence until the next time the course is given.

Limitations of the 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 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.

If there are special grounds, or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus's regulations on the examination form, the number of examination opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes as well as the level of expected skills, knowledge and abilities may not be changed, removed or reduced.

## Other directives

The course language is English and examination is performed in English.

Course evaluation will be carried out in accordance with the guidelines established by the Board of Higher Education.

Oral evaluation in the form of course council meetings will be carried out during the course.

## Literature and other teaching aids

### *Mandatory literature*

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

### *Recommended literature*

Weinberg, Robert A.

#### **The biology of cancer**

2. ed. : New York : Garland Science, 2014 [dvs 2013] - 876, 6, 30, 28 s.

ISBN:9780815342205 (hft.) LIBRIS-ID:14608758

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