



**Karolinska
Institutet**

Course syllabus for

Applied Programming in Life Sciences 1, 1.5 credits

Tillämpad programmering för livsvetenskaperna 1, 1.5 hp

This course syllabus is valid from autumn 2019.

Please note that the course syllabus is available in the following versions:

[Autumn2018](#) , [Autumn2019](#)

Course code	5MT007
Course name	Applied Programming in Life Sciences 1
Credits	1.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Molecular Life Science
Level	AV - Second cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Cell and Molecular Biology
Decided by	Programnämnden för biomedicinprogrammen
Decision date	2018-02-21
Revised by	Programme committee for study programmes in biomedicine
Last revision	2019-03-27
Course syllabus valid from	Autumn 2019

Objectives

On completion of the course, the student should:

Regarding knowledge and understanding

- Understand the construction of the programming languages, including how variables are declared, underlying data types, and how logical terms, loops and functions are defined

Regarding competence and skills

- be able to write programming code to solve simple problems be able to identify and correct simpler programming errors be able to load data from disk and write data to disk.

Content

Introduction to programming in a modern programming language focusing on problem solving in biology.

Teaching methods

The teaching includes lectures, group tuition and project work on group and individual level.

Examination

The examinations consist of oral presentations of computer labs, as well as a written exam. The grade scale for oral presentations is U / G. Written exam is graded with U / G / VG. The grade of full course is based on the grade of the written exam.

Compulsory participation

Oral presentations of computer labs. 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 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.

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

Course material

Specific material referred to during the course forms the course literature.