

KEMC10, Chemistry: Pharmaceutical Science, 7.5 credits

Kemi: Läkemedelsvetenskap, 7,5 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2007-03-01 and was last revised on 2007-03-01. The revised syllabus applies from 2007-07-01, autumn semester 2007.

General Information

The course is an optional first-cycle course for a degree of Bachelor of Science, main field of study Chemistry.

Language of instruction: English and Swedish
When necessary, the course in full is given in English.

Main field of studies

Chemistry

Depth of study relative to the degree requirements

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

Learning outcomes

The aim of the course is to give basic knowledge and broad understanding of pharmaceutical chemistry and pharmacological principles from a molecular perspective.

The aim of the course is that on its completion students will have acquired the following skills and knowledge:

- describe how drug development been usually done
- describe common target molecules for drug development
- define basic pharmacodynamic and pharmacokinetic concepts
- explain how computers are used in drug development
- orally and in writing be able to discuss the properties of drug molecules
- evaluate a molecular structure as a potential drug candidate

Course content

Lectures: The course treats general pharmacological principles and brings up different groups of drugs, their impact, field of use and chemical structure. Furthermore, important therapeutic areas are discussed, such as drugs of the nerve system, hormones and their use as drugs, drugs affecting the heart, drug against diseases in the respiratory organs, anaesthetics, analgesics, sedatives, antivirals, antibiotics and cancer drugs. Methods for searching novel candidate drugs (drug development), developing of computer models for predicting pharmacological properties, and structure-activity relationships are discussed.

Course design

Teaching comprises lectures.

Assessment

Assessment is by written examination at the end of the course.

A re-sit examination is offered soon after the examination to students who do not pass.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass, Pass with distinction.

Students are awarded one of the following grades: Pass with Distinction, Pass or Fail. To be awarded Pass on the entire course students must pass the examination. The examination grades are: Pass with Distinction, Pass or Fail. Grades for the project are: Pass or Fail. The final grade for the course is determined by the grade on the final examination.

Entry requirements

To be eligible for this course students must have basic eligibility and 60 higher education credits in completed Science courses, including passes in courses equivalent to KEM012 Organic Chemistry, 15 credits.

Equivalent knowledge that has been gained in another way also provides eligibility for the course.

Further information

The course cannot be credited as part of a degree programme that also includes KEM701 Pharmaceutical Science 7.5 credits, KEM710 Medicinal Chemistry 30 credits or KEM711 Medicinal Chemistry including Degree Project 60 credits.

Subcourses in KEMC10, Chemistry: Pharmaceutical Science

Applies from H07

0701 Pharmaceutical Science, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction