KE2331 Pharmaceutical Technology 7.5 credits

Läkemedelsteknologi

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for KE2331 valid from Autumn 2019

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Chemical Science and Engineering

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After the course the student should be able to:

- Describe manufacturing of pharmaceutical dosage forms, batch-wise pharmaceutical production processes, and the components and unit operations thereof,
- Plan, design and perform experiments to develop, design or improve batch-wise processes for production of solid pharmaceutical forms,
- Perform calculations over design, performance, operation and scaleup/scaledown of pharmaceutical unit operations,
- Analyse pharmaceutical production processes and propose safe, sustainable, technically feasible and economically viable improvements or solutions to process problems.

Course contents

The course focuses on manufacturing of pharmaceuticals, specifically the process steps from active pharmaceutical ingredient to final formulation, and covers in particular pharmaceutical unit operations for manufacture of solid dosage forms. The course focuses on batch processing and agitated tank operations, in multi-purpose, multi-product plants. The emphasis is on the influence of physico-chemical and processing conditions on process results and product properties, specifically as relates to the pharmaceutical industry. The course gives a detailed description and analysis of the unit operations crystallization, agitation and mixing, and drying, together with underlying physico-chemical theory. The course continues with a description of dosage forms, pharmaceutical excipients, and important pharmaceutical unit operations such as granulation, grinding and tableting.

Examination

- LIT1 - Literature review, 1.5 credits, grading scale: P, F
- TEN1 - Written exam, 6.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

The final grade of the course is determined based on an algorithm described in the course-PM

Other requirements for final grade

Classes with mandatory attendance are specified in the course information.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.