

**SYLLABUS**

# **General Pharmacology, contrast agents and pharmaceutical calculation 7.5 credits M0070H**

**Allmän farmakologi, kontrastmedel och läkemedelsberäkning**

**Course syllabus admitted: Autumn 2020 Sp 1 - Present**

**DECISION DATE  
2020-06-18**

# General Pharmacology,contrast agents and pharmaceutical calculation 7.5 credits M0070H

## Allmän farmakologi, kontrastmedel och läkemedelsberäkning

### First cycle, M0070H

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	U G VG *	Medicinsk vetenskap	Medicine

## Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language

M0026H Medical Science: Anatomy and Physiology in position to Radiology M0085H Radiography, basic course I

M0050H Radiation Science and Radiological Modalities

M0086H Radiography, basic course II

## Selection

The selection is based on 1-165 credits.

## Examiner

Sara Larsson

## Course Aim

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

- Explain and understand principles of general pharmacology
- Carry out pharmaceutical calculations within the terms of patient safety
- Explain the meaning of the laws and regulations on drug handling in healthcare and apply it theoretical and practical
- Management of drug handling
- Describe the use of different contrast media and their adverse reactions.

## Contents

- Basic pharmacology, routes of administration, pharmaceutical dosage forms, pharmacodynamics, pharmacokinetics
- The fields of use of contrast agents, indications, contraindications and adverse effects
- Pharmaceutical legislation
- Practical management of drug handling
- Pharmaceutical calculations: Dimensional analysis, unit replacements, solving simple equations, percentage conversions and calculations for dilutions.

## Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Teaching and learning take place through self-directed studies, study assignments, group discussions, laboratory work, seminars and the examination. Drug calculation will be studied and practiced in association with placements in the parallel course. Lectures will be held for selected parts of the course. Participation in laboratory work and seminars is compulsory. The content of the course components and its forms of teaching are specifically targeted at the profession of the radiology nurse.

## Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. The learning outcomes for the course will be examined and assessed through assignment submissions (individual and/or in groups), laboratory work, seminars and the examination.

Achieving a Pass grade for the entire course requires Pass grades in all other parts and that the compulsory components are completed.

## Remarks

This course must be passed before you can be admitted to the course, Radiography with a specialisation in conventional x-ray. All examination components must be completed no later than study period 4, i.e. the closest previous study period.

## Overlap

The course M0070H is equal to M0116H, M0052H

This course replaces/equal to M0052H

## Literature. Valid from Autumn 2020 Sp 1

Aspelin, P. & Pettersson, H. (red.) (senaste upplaga). Radiologi. Lund: Studentlitteratur.

Heise Löwgren, C. (red.) (senaste upplaga). Författningshandbok: för personal inom hälso- och sjukvården. Stockholm: Liber (Lagar och författningar kan även hämtas via nätet)

Olsen, L.A. & Hälleberg Nyman, M. (senaste upplaga). Säker läkemedelsberäkning: dos, styrka, mängd. Stockholm: Natur & kultur.

Simonsen, T., Aarbakke, J. & Hasselström, J. (senaste upplaga). Illustrerad farmakologi. 1, Principer och tillämpningar. Stockholm: Natur & kultur

Reference literature may be added and is stated in the study guide.

## Course offered by

Department of Health, Education and Technology

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0002	Written exam in pharmaceutical calculation	U G#	1.5	Mandatory	A12	
0005	Written individual exam in basic pharmacology	U G VG *	2.5	Mandatory	A18	
0006	Written individual exam contrast media	U G VG *	2	Mandatory	A18	
0007	Assignment and seminar in pharmaceutical handling	U G#	1.5	Mandatory	A18	

## Last revised

by 2020-06-18

## Syllabus established

by Prefekt vid Institutionen för hälsovetenskap 2012-03-14