SYLLABUS

Radiography - imaging systems and methods 15 credits M0089H

Radiografi - bildgivande system och metoder

Course syllabus admitted: Autumn 2019 Sp 1 - Spring 2020 Sp 4

DECISION DATE
2019-02-08

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Radiography - imaging systems and methods 15 credits M0089H

Radiografi - bildgivande system och metoder

First cycle, M0089H

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	U G VG *	Radiologi	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 Entry requirements for the course corresponding to:
M0085H Radiography, basic course I
M0086H Radiography, basic course II
M0026H Medical Science: Anatomy and Physiology in position to Radiology
M0050H Radiation science and radiological modalities
M0067H Radiography Nursing Interventions in position radiography with Clinical Practice
M0066H Radiography Nursing Technigues in position Radiography with Clinical Practice
M0029H Medical Science: Microbiology, infection control and infection disease
M0070H General Pharmacology, contrast agents and pharmaceutical calculation
M0088H Medical Science - in-depth studies in anatomy and pathology

Selection

The selection is based on 1-165 credits.

Examiner

Veronica Jönsson

Course Aim

On completion of the course, the student should have good knowledge of imaging systems and methods within radiography, which means that the student should be able to:

- Describe different types of diagnostic modalities and their main fields of application
- Describe radiation protection and safety aspects on different diagnostic modalities
- Explain how a digital image is produced, processed and stored
- Understand the fundamental principles of projection theory
- Describe projections and image criteria for basic radiography examinations
- Demonstrate the ability to understand and interpret a radiography referral
- Describe how different exposure parameters affect the image quality

Contents

- Diagnostic modalities within radiology
- Projection theory
- Digital image handling
- RIS, DICOM and PACS
- Radiation protection and patient safety

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Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
The course provides students introductory lectures on the various components to attain the course objectives. Teaching is both on campus and through distance learning techniques. The students also acquire knowledge and practice fulfilment of course objectives through compulsory laboratory work/seminars. During the course students work both individually and in groups to develop their knowledge. Other teaching methods may also be used.

The content of the course components and its teaching methods are specifically tailored for the radiographer profession.

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 examination takes place both individually and in groups. Alternative examination methods may be used.

Remarks

This is a first-cycle course. The study guide will be available in the course room in Canvas.

Overlap

The course M0089H is equal to M0103H, M0051H

The course is a merger of components of the courses M0069H, M0051H and M0076H.

Literature. Valid from Spring 2019 Sp 4

Aspelin, P. & Pettersson, H. (rev.) (2008). Radiologi (Radiology). (1st ed.) Lund: Student literature.
Berglund, E. & Jönsson, B. (2007). Medicinsk fysik. (1st ed.) Lund: Student literature.
Bontrager, K.L. & Lampignano, J.P. (2010). Bontrager’s handbook of radiographic positioning and techniques. (7th ed.) St. Louis, Mo.: Mosby/Elsevier.
Ehrlich, R.A. & Coakes, D.M. (2013). Patient care in radiography: with an introduction to medical imaging. (8th ed.) St. Louis, Mo.: Elsevier Mosby
Hietala,S-O. & Åhlström Riklund, K.(rev.)(2013). Nuklearmedicin. (2nd ed.) Lund: Student literature.
Jacobsons, B. (2006). Medicin och teknik. (5., [rev. and reworked] ed.) Lund: Student literature.

Course offered by

Department of Health Sciences

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Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Seminar	U G#	3	Mandatory	A17	
0002	Written assignments	U G VG *	5	Mandatory	A17	
0003	Laboratory work	U G#	3	Mandatory	A17	
0004	Individual examination	U G VG *	4	Mandatory	A17	

Last revised

by Head of Department of Health Sciences 2019-02-08

Syllabus established

by Prefekt vid Institutionen för hälsovetenskap 2017-02-10

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