



**Karolinska
Institutet**

Course syllabus for

Radiography - clinical education 4, 7.5 credits

Radiografi - verksamhetsförlagd utbildning 4, 7.5 hp

This course syllabus is valid from autumn 2016.

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

Spring2008 , Spring2009 , Autumn2009 , Spring2010 , Autumn2012 , Autumn2016 , Autumn2018 , Autumn2024 , Spring2025

Course code	1RS017
Course name	Radiography - clinical education 4
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Radiography
Level	G1 - First cycle 1
Grading scale	Pass, Fail
Department	Department of Clinical Science, Intervention and Technology
Decided by	Programnämnden för Röntgensjuksköterskeprogrammet
Decision date	2007-12-10
Revised by	Education committee Clintec
Last revision	2016-05-24
Course syllabus valid from	Autumn 2016

Specific entry requirements

To be qualified to higher semester is required it that the student has taken at least 15 HE credits from nearest previous semester and all credits from earlier semesters. For admission to the course, passed from the course Radiography - clinical rotation 2, 7.5 HE credits, is required.

Students who have failed in the clinical rotation or the equivalent as a consequence of demonstrating serious deficiencies in knowledge, skills or attitude, that the patient's safety or confidence in healthcare have been at risk is qualified for new placement only when the individual action plan has been completed.

Objectives

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

- show professional attitude in contact with patients, observe patient's needs of care and take steps for patient's security and convenience at radiographic examinations and give adequate information to patient and relative.

- apply correct methodology based on the aim of the examination and perform examinations in a radiation-hygienic way and be able to motivate the used method.
- have the individual patient's anatomy and preconditions as a base for setting of radiological examinations.
- identify pathological changes which require adjustment of method and patient care.
- assess the imaging material concerning image quality and criteria and make image retakes when needed.
- describe and demonstrate one of the most common nuclear medical examinations and describe the principles to work with regard to radiation safety on a nuclear medical section.
- document adequate information in connection with an examination.
- identify the own strengths and limits and express the own needs of development within the subject of this course.

Content

The main part of the course contains practical skills training within conventional radiography and a smaller part at a nuclear medical section. The clinical rotation focuses on parts that concerns skills in connection with examination as well as communicative aspects and patient care.

During the course, the student develops his skills in examination methodology within conventional radiography. Strong emphasis is applied at understanding of referral contents, projections and settings for each examination. This takes place through practical skills training and analysis of imaging material regarding anatomy, possible pathology and criteria for examination based on the issue. The student deepens his understanding of the factors that influence image quality and radiation dose to be able to adapt these according to the issue and the patient, in order to perform the examination. The student will also train to perform needed retakes of an examination and image processing possibilities. Study assignment is included this part.

Within nuclear medicine, the student participates at some of the most commonly occurring nuclear medical examinations as bone scintigraphy, renogram, sentinel node, radionuclide imaging of cerebral blood flow or tumours. This implies that the student obtains knowledge of the principles of calculation and administration of radiopharmaceuticals with retained radiation safety. Study assignment is included this part.

The student deepens his ability of patient care by identifying the patient's needs of care at various types of examinations and takes steps for caring for the patient's well-being and convenience at radiographic examinations.

This course is located to semester three or semester four in the radiographer education program.

Teaching methods

Clinical skills training when the student trains communication and patient care, and to plan, prepare and perform radiographic examinations as a whole with support of a tutor.

Study assignments and seminars. The student is expected to take responsibility for his/her own learning through active knowledge acquisition and participation in examinations.

To write portfolio in order to support the own professional development.

Examination

In the final assessment, an overall assessment, a clinical exam with conventional radiography and study assignments, are included. Assessments during the clinical rotation are carried out by means of evaluation forms about which the student is informed at the beginning of the course.

At the clinical exam, the student performs examinations on patients based on referral and method book. The student will account orally for the method of examination concerning technology, projections, anatomic structures in the imaging material, and use correct terminology.

The clinical rotation is compulsory and constitutes 32 hours per 1.5 HE credits. Compensation due to absence will be planned in consultation with appointed clinical teacher.

The student has the right to take the course at most two times.

The examiner may with immediate effect interrupt a student's clinical rotation (VFU), or the equivalent, if the student demonstrates such serious deficiencies in knowledge, skills or attitudes that patient safety or patient confidence in healthcare is at risk. When clinical rotation is interrupted according to this, it implies that the student fails in the current part, and that one clinical rotation opportunity is used up. In such cases, an individual action plan should be set up for required activities and examinations, before the student is given a possibility for a new clinical rotation in the course.

If the course is examined by a extern exam, or other assignments with deadlines, a latest submission date is given at the introduction of the course. In cases where a completion is required a new date for latest submission is set. If the requirements for submission are not fulfilled the student is given the opportunity to submit the exam or the assignment at the next time course is given. Reasons for not meeting deadlines may be taken under consideration by examiner.

Transitional provisions

The student may be examined under a previous syllabus within a year after the date when a close-down or major changes of the course was decided.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Board of Education at Karolinska Institutet.

Literature and other teaching aids

Björkman, Eva; Karlsson, Karin

Medicinsk teknik för sjuksköterskor : material, metod, ansvar

2., [rev. och utök.] uppl. : Lund : Studentlitteratur, 2001 - 206 s.

ISBN:91-44-01669-7 LIBRIS-ID:8353030

[Library search](#)

Ehrlich, Ruth Ann; McCloskey, Ellen Doble; Daly, Joan A.

Patient care in radiography : with an introduction to medical imaging

6. ed. : St. Louis, Mo. : Mosby, cop. 2004 - xv, 447 s.

ISBN:0-323-01937-4 LIBRIS-ID:9649937

[Library search](#)

Författningshandbok för personal inom hälso- och sjukvården.n 2007 = 38. uppl.

Raadu, Gunnel

Stockholm : Liber, 2007 - 727 s.

ISBN:978-91-47-08420-3 LIBRIS-ID:10324013

[Library search](#)

Isaksson, Mats

Grundläggande strålningsfysik

Lund, Annika

Lund : Studentlitteratur, 2002 - 310 s.

ISBN:91-44-01528-3 LIBRIS-ID:8427844

[Library search](#)

Möller, Torsten B.0 77501

Pocket atlas of radiographic positioning

Reif, Emil

Stuttgart : Thieme, 1997 - ix, 286 s.

ISBN:3-13-107441-8 (Stuttgart) LIBRIS-ID:4668759

[Library search](#)

Möller, Torsten B.; Reif, Emil

Pocket atlas of sectional anatomy : computed tomography and magnetic resonance imaging. n Vol. 1, p Head and neck

3. ed., rev. and updated /b Torsten B.Moeller, Emil Reif : Stuttgart : Thieme, 2007 - ix, 264 s.

ISBN:3-13-125503-X (GTV) LIBRIS-ID:10257344

[Library search](#)

Möller, Torsten B.; Reif, Emil

Pocket atlas of sectional anatomy : computed tomography and magnetic resonance imaging. n Vol. 2, p Thorax, heart, abdomen and pelvis

3. ed., rev. and updated : Stuttgart : Thieme, cop. 2007 - viii, 247 s.

ISBN:3-13-125603-6 (GTV) LIBRIS-ID:10322889

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