



**Karolinska
Institutet**

Course syllabus for

Radiography - clinical education 5, 7.5 credits

Radiografi - verksamhetsförlagd utbildning 5, 7.5 hp

This course syllabus is valid from autumn 2012.

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

[Autumn2007](#) , [Spring2009](#) , [Autumn2009](#) , [Autumn2010](#) , [Autumn2011](#) , Autumn2012 , [Autumn2016](#) , [Autumn2018](#) , [Autumn2024](#) , [Spring2025](#)

Course code	1RS019
Course name	Radiography - clinical education 5
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Radiography
Level	G2 - First cycle 2
Grading scale	Pass, Fail
Department	Department of Clinical Science, Intervention and Technology
Decided by	Programnämnden för röntgensjuksköterskeprogrammet
Decision date	2007-06-20
Revised by	Programnämnd 6 (Biomedicinsk analytiker- och Röntgensjuksköterskeprogrammen)
Last revision	2012-05-09
Course syllabus valid from	Autumn 2012

Specific entry requirements

To be qualified to a higher semester, it is required that the student has taken at least 15 credits from last semester, and all credits from previous semesters. The admittance to the course requires a pass in the course Radiography - clinical rotation 4, 7,5 credits Students who have failed in the clinical rotation or the equivalent as a consequence of demonstrating deficiencies in knowledge, skills or attitude so serious that the patient's safety or confidence in healthcare have been at risk is qualified for a new clinical rotation only when the individual action plan has been completed.

Objectives

The aims of the course are that the student has acquired knowledge and skills within the radiographer's field of responsibility within conventional radiography, magnetic resonance imaging and ultrasound. Further, the aim is that the student has developed his/her ability to interact with patients, their family, and colleagues.

After completion of the course, the student shall be able to:

- treat the patients and their family showing a professional attitude and based on their different needs, and give patients adequate care in complex nursing environments
- adapt the communication to the patient's needs, and give individual information about examinations and treatments
- prepare and instruct the patient in connection with examinations and treatments and consider safety aspects
- discuss and explain the choice of the method for examination, based on information in the referrals and from the patients
- plan and perform occurring conventional examinations independently, as a whole and within reasonable time, and evaluate the quality of the examination and make corrections when needed
- explain and apply a radiation-hygienic way of working within conventional radiography, regarding image quality and radiation protection of patient and staff
- perform commonly occurring examinations with support of the clinical supervisor within magnetic resonance imaging
- perform aseptic technique and prepare patients and equipment for sterile procedures
- document or explain the documentation of adequate information according to current regulations in connection with an examination or a treatment
- show good ability to cooperation with different professionals

Content

The main part of the course implies clinical training within conventional radiography and magnetic resonance imaging (MRI). A smaller part is located within diagnostic ultrasound. Clinical rotation focuses on parts that concerns values, knowledge and skills, as well as communicative aspects and patient care in connection with examinations or treatments.

Conventional radiography

In order to gain an independent professional role within diagnostic imaging, the student will be training all phases of the examinations. This includes planning, preparation and performance of the examinations as a wholeness, based on the information in the referral and instructions in a method book. An important aspect is independent evaluation of radiographic images as a base for the diagnosis. Patient treatment and care, as well as communicative skills in contact with patients, relatives and colleagues, are essential aspects within all activities.

Magnetic resonance imaging

The student participates in planning and preparation as the prevention of risks and application of security measures are of great importance. The student performs commonly occurring examinations with support of a tutor, and this includes even patient care and communication, administration of drugs and documentation.

Ultrasound

The student participates in planning and preparation of examinations and contributes in occurring treatments such as thoracocentesis or taking of specimens and administration of drugs.

Teaching methods

In addition to practical training, the course includes even study assignments and seminars in order to stimulate active acquisition of knowledge, problemsolving and anchorage to science and evidences, and to give the student an overall view of methods and to reflect on patient perspective. Student writes a portfolio in order to support the own professional development.

Planning of the clinical education is done in consultation with the appointed adjunct clinical teacher.

Examination

In the final assessment, an overall assessment, clinical examination and study tasks, are included. The

student's achievements are assessed on the bases of expected learning outcomes. The clinical examination means that the student performs conventional radiographic examinations on patients, evaluates image quality as diagnostic base, and motivates the chosen methodic as well as patient care. An evaluation form which is given to the student at the beginning of the course, is used as the basis of half-time and final assessment.

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

The student has right to undergo the clinical rotation within a course at most two times.

A student's clinical education or equivalent may be ended immediately by an examiner if the student demonstrates such a serious lack of knowledge, skills or attitude that patient safety or patient's confidence in medical care is jeopardized. When clinical education is ended in this way, it implies that the student fails the current module and one opportunity for clinical education has been used.

In such cases, an individual action plan will be drawn up detailing which activities and knowledge tests are required, before the student will be given a new opportunity to carry out clinical education.

Transitional provisions

The student has the opportunity to be examined according to a previous curriculum within a year from the date when a close-down or major changes or 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

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](#)

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

[Library search](#)

Möller, Torsten B.; Reif, Emil

Pocket atlas of sectional anatomy : computed tomography and magnetic resonance imaging. n Vol.

3, p Spine, extremities, joints

Stuttgart : Thieme, cop. 2007- - ix, 334 s.

LIBRIS-ID:10446229

URL:

<https://lt.itag.bibl.liu.se/login?url=http://www.thieme.com/SID2358701978210/ebooklibrary/flexibook/pulz>
[Extern access endast anställda och studenter vid LiU](#)

Möller, Torsten B.; Reif, Emil; Abel, Eleonore.

Pocket atlas of radiographic positioning : including positioning for conventional angiography, CT, and MRI

3. ed. : Stuttgart : Thieme, 2010. - xiii, 378 p.

ISBN:978-3-13-784203-3 LIBRIS-ID:11925829

[Library search](#)

Radiologi

Aspelin, Peter; Pettersson, Holger

1. uppl. : Lund : Studentlitteratur, 2008 - 848 s.

ISBN:978-91-44-03887-2 (inb.) LIBRIS-ID:10948825

URL: <http://www.studentlitteratur.se/omslagsbild/artnr/31995-01/height/320/width/320/bild.jpg>

[Library search](#)

Björkman, Eva; Karlsson, Karin

Medicinsk teknik för sjuksköterskor : material, metod, ansvar

3., [rev. och utök.] uppl. : Lund : Studentlitteratur, 2008 - 367 s.

ISBN:978-91-44-04794-2 LIBRIS-ID:10956051

[Library search](#)

Isaksson, Mats

Grundläggande strålningsfysik

Lund, Annika

Lund : Studentlitteratur, 2002 - 310 s.

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

[Library search](#)

Ehnfors, M; Ehrenberg, A; Thorell-Ekstrand, I

VIPS-boken

Stockholm : Vårdförbundet SHSTF FOU 2000:48, 2007

Ellis, Harold; Logan, B. M.0 231179; Dixon, Adrian K.

Human sectional anatomy : atlas of body sections, CT and MRI images

3. ed. : London : Hodder Arnold, 2007 - xvii, 267 p.

ISBN:978-0-340-91222-5 LIBRIS-ID:10400822

[Library search](#)

Feneis, Heinz

Anatomisk bildordbok

Dauber, Wolfgang

4., omarb. uppl. : Stockholm : Liber, 2001 - [8], 447 s.

ISBN:91-47-05077-2 LIBRIS-ID:8354393

[Library search](#)

Författningshandbok för personal inom hälso- och sjukvården. 2010 = 41. uppl.

Raadu, Gunnel

Stockholm : Liber, 2009 - 823 s.

ISBN:978-91-47-09938-2 LIBRIS-ID:11741634

[Library search](#)

Lindskog, Bengt I.

Medicinsk terminologi

Andrén-Sandberg, Åke; Frank, Urban; Buckhöj, Poul

5., [rev.] uppl. /b [illustrationer: Urban Frank och Poul Buckhöjd] : Stockholm : Norstedts Akademiska, 2008 - 704 s.

ISBN:978-91-7227-557-7 (inb.) LIBRIS-ID:10740673

[Library search](#)

Rönnberg, L

Hälso- och sjukvårdsrätt

2., [uppdaterade och omarb.] uppl. : Lund : Studentlitteratur, 2007 - 340 s.

ISBN:978-91-44-02067-9 LIBRIS-ID:10302460

URL: <http://www.studentlitteratur.se/omslagsbild/artnr/31851-02/height/320/width/320/bild.jpg>

[Library search](#)