



**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 2010.

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	2010-05-17
Course syllabus valid from	Autumn 2010

### **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 aim of the course is that the student should acquire knowledge and skills within the radiographer's area of responsibility in connection with angiography, interventions, 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. On completion of the course, the student should be able to - treat the patients and their family with respect and based on their different needs and give patients adequate care in complex nursing environments - adapt the communication on the basis of 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 examination method based on information in the referrals and from the patients - carry out commonly occurring examinations with support of the supervisor within magnetic resonance imaging - perform aseptic technique and prepare patients and equipment for sterile procedures - assist within angiography or intervention with support of the supervisor - explain and apply a radiation-hygienic way of working in connection with angiography and interventions regarding image quality and radiation protection of patients and staff - explain for reporting and documentation of adequate information according to current regulations in connection with examination or treatment

## **Content**

The main part of the course implies practical training within angiography and intervention, and magnetic resonance imaging (MRI). A smaller part is located within ultrasound diagnostics. Clinical rotation focuses on parts that concerns the values, knowledge and skills, as well as communicative aspects and patient care in connection with the examinations or treatments. Angiography and interventions In order to get an overall view about the aim and the performance of examinations and treatments, the student will participate in all the phases with support of a supervisor. This means planning and preparations on the basis of the information from patient journal and from communication with patients and staff, and performance of the examinations and reporting. Important aspects are patient care and communication skills, drugs, laying a sterile table and management of other sterile materials, radiation protection arrangements, reporting and documentation after a completed examination or treatment. 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 the supervisor and in this also includes patient care, communication and administration of drugs, and documentation. Ultrasound The student participates in planning and preparation of examinations and contributes in occurring treatments such as thoracentesis or taking of specimens and administration of drugs.

## **Teaching methods**

In addition of practical training, the course includes even study assignments and seminars in order to stimulate active knowledge acquisition, problem-solving and theoretical anchorage and to give the student an overall view of methods and to reflect on patient perspective. Planning of the clinical education takes place in consultation with the appointed adjunct clinical teacher.

## **Examination**

In the final assessment, an overall assessment is included, which implies that the student's achievements are assessed based on the parts in the expected learning outcomes and study assignments. 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 is planned in consultation with the appointed clinical teacher. The student has the right to undergo the clinical rotation within a 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 a clinical rotation is interrupted like 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.

## **Transitional provisions**

The student has the opportunity to be examined according to a previous course syllabus 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

*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](#)

*Isaksson, Mats*

**Grundläggande strålningsfysik**

*Lund, Annika*

Lund : Studentlitteratur, 2002 - 310 s.

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

[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*

**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](#)

**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](#)*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; Buckhøj, Poul*

5., [rev.] uppl. /b [illustrationer: Urban Frank och Poul Buckhøj] : 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](#)