Course syllabus for

Nuclear Medicine, 7.5 credits

Nuklearmedicin, 7.5 hp
This course syllabus is valid from spring 2012.

Course code	1RS046
Course name	Nuclear Medicine
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	Programnämnd 6 (Biomedicinsk analytiker- och Röntgensjusköterskeprogrammen)
Decision date	2011-11-24
Course syllabus valid from	Spring 2012

Specific entry requirements

To be qualified to a higher semester, it is required that the student has taken at least 15 HE credits from last semester, and all credits from previous semesters.

Objectives

On completion of the course, the student should be able to; describe the technical structure and physical the background of the Gamma camera and the PET camera, describe the production and absorption mechanism of the radiopharmaceuticals. apply radiation protection regulations in connection with nuclear medical examinations. calculate the dose, complete and inject radiopharmaceuticals. apply current methodology in commonly occurring examinations within nuclear medicine. on the basis of the referral, present an evaluation of a common nuclear medical study. analyse a nuclear medical study in order to obtain a diagnostic understanding thereby. be familiar with structure and use of PET-CT.

Content

The course deals with the physical and technical principles of the nuclear medical equipment. The course also provides an advanced study in the fields of radiation physics and radiation protection in nuclear medicine. Further, the production and absorption mechanisms of the radiopharmaceuticals will be treated. The student will also be trained to independently, complete, calculate dose, and inject radiopharmaceuticals, and carry out commonly occurring nuclear medical examinations. The placement

in the gamma camera will imply that student is trained to plan, carry out and present commonly occurring examinations such as skeleton scintigraphy and renography. This also implies that the student during the course should create an understanding regarding nuclear medical reconstruction and diagnostic imaging. Shorter field studies on PET - CT are included in the course.

Teaching methods

The working methods that are used during the course are placement, field studies, seminars, laboratory sessions and individual written work.

Examination

For a Pass grade in the course, approved participation in seminars and an approved individual written examination assignment are required. In consultation with the examiner of the course, the student may get a complementary assignment in case of absence from a compulsory part. The student is entitled to a total of six test occasions to get passed. The course is given on three occasions. One within the course, one during the following re-examination. The third opportunity is provided before the beginning of the next semester, or in close connection to that. In some cases, it is required that the student submits an exemption application before he/she has the results of his/her latest completed examination. Three more opportunities are provided according to the same set-up when the course is given next time.

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

Carlsson, Sten; Svensson, Sven-Eric

Nuklearmedicin : E:bok

Svensk förening för nuklearmedicin,

Njurarna och övre urinvägarna : metoder använda inom klinisk fysiologi för diagnostik och funktionsvärdering

Granerus, Göran

Lund : Studentlitteratur : b Svensk fören. för klinisk fysiologi, 2000 - 261 s.

ISBN:91-44-00962-3 LIBRIS-ID:8352770

Library search

Nuklearmedicin

Hietala, Sven-Ola

Lund : Studentlitteratur, 1998 - 272 s.

ISBN:91-44-00825-2 LIBRIS-ID:7274924

Library search

Isaksson, Mats

Grundläggande strålningsfysik
Lund, Annika

Lund : Studentlitteratur, 2002 - 310 s.
ISBN:91-44-01528-3 LIBRIS-ID:8427844
Library search

The Esential Physics of Medical Imaging : Second Edition
Buchberg, J.T; Seibert, J.A; Leidholdt, E.M; Boone, J.M

2:a : Philadelpia : Lippincott Williams Wilkins, 2002 - 933
ISBN:0-683-30118-7
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