Course syllabus for

Cardiovascular disease - a translational course from molecule to disease, 4.5 credits

Hjärt-kärlsjukdomar - en translationell kurs från molekyl till klinik, 4.5 hp
This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

Course code	2LK033
Course name	Cardiovascular disease - a translational course from molecule to disease
Credits	4.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Medicine
Level	AV - Second cycle
Grading scale	Pass, Fail
Department	Department of Medicine, Solna
Decided by	Programnämnd 2
Decision date	2010-03-29
Revised by	Programme committee for study programme in medicine
Last revision	2024-06-18
Course syllabus valid from	Spring 2010

Specific entry requirements

All The higher education credits from semester 1-3 and passed on the part "Medical diagnostics" in the course the ill human being 2 and part " Clinical driving licence in the course Integrated examination.

Objectives

The general learning objectives are that the student should have obtained an advanced knowledge of investigation and treatment of atherosclerosis and its sequelas through specialisation on disease mechanisms and visualisation of atherosclerosis.

The knowledge is structured according to the SOLO taxonomy (S1-S4) and the skills according to Miller's pyramid (M1-M4)*.

Knowledge and understanding
The student should be able to
- have knowledge about and understanding of origin of atherosclerosis (S1)

- be able to identify atherosclerosis with different methods (S1-2)
- be able to treat atherosclerosis related diseases (S3-4)
- be able to understand relationship between the clinical symptoms and underlying aetiology (S4)

Skills:
The student should
- be able to diagnose and treat atherosclerosis related diseases (M1)
- be able to carry out a research laboratory session (M2-3)
- be able to interpret and discuss clinical findings (M2-3)
- be able to suggest adequate investigation including proposal for mechanism (M3)
- have certain skills in literature search (M4)

Approach:
The student should
- be able to show ability to seek knowledge concerning disease mechanisms, investigation and treatment based on a patient case (M1-3)
- be able to make research-ethical considerations (M1-2)

Content

The course will be preparatory for project work in the area cardiovascular medicine during semester 7 During the course students will learn investigation and treatment of sequelas to atherosclerosis from a mechanistic perspective. Visualisation of atherosclerosis and its sequelas have obtained increasing greater clinical importance. Therefore, the student will increase his understanding of field of use for echocardiography, non-invasive and invasive coronary angiography and magnetic resonance examinations.

The student will be exposed to patient case that directly is connected to recent research results in a translational way to a greater extent compared with a traditional course outline.

The student will also be presented to research within the cardiovascular part of the activities within Centres for Molecular Internal Medicine. The tuition forms will in a smaller part be lectures and to larger part demonstrations, seminars and laboratory practice. In the course, a literature assignment is also included.

Teaching methods

The course builds to a large extent of case discussions. The course starts with round on coronary care unit as introduction to the subject. During the course study visits and demonstrations in scientific environment and within clinical activities for invasive coronary angiography, non-invasive coronary angiography, MRI, echocardiography, myocardial scintigraphy, carotid ultrasound endothelial function test and animal lab will take place. A smaller laboratory session is included with a presentation of advanced assignment. The seminars will deal with internal medicine subjects such as diabetes, cardiovascular disease, hyperlipidemia, hypertension, stroke and peripheral vascular disorder, kidneys and heart and abdominal aorta aneurysm.

Integrating assignments:
- Chest pain
- High blood pressure
- Heart arrests

Examination

Compulsory parts: participation in seminars, case discussions, laboratory session and advanced

assignment. Participation in seminars, placement and case discussions. Written higher education qualification consists of a literature assignment.

Limitations of the number examination or practical training sessions
The number of examination and practical training sessions follows the local guidelines of Karolinska Institutet, implying that the number of examinations is limited to 6, while placement, as a rule, may be repeated only once.

Examiner can with immediate impact interrupt a student's placement (VFU) or the equivalent if the student shows such serious deficiencies in knowledge, skills or attitudes that the patient security or the patients' trust for the healthcare are jeopardised. 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.

Eligibility
Student that has failed on placement (VFU)/equivalent as a consequence of that the student has shown so serious deficiencies in knowledge, skills or attitudes that the patient security or the patients' trust for the healthcare have been jeopardised is qualified to new
Placement only when the individual action plan have been completed.

Transitional provisions

If a course has been closed down or undergone major changes, at least two additional examinations (excluding regular examinations) in the previous contents are provided during a period of a year from the date of the change.

Other directives

The course connects to and deepen knowledge within the central parts of the Study Programme in Medicine.

Course evaluation takes place according to the guidelines that have been stated by the Board of education at Karolinska Institutet.

The course may not be included in a degree at the same time as an advanced course completed inside or outside the country, the contents of which fully or in essential parts corresponds to the current course contents. If you are uncertain - contact the study guidance.

*
The knowledge is tiered according to the SOLO taxonomy:
S1) simple (e.g. know, identify),
S2) composite (e.g. account for, describe),
S3) related (e.g. analyse, relate), and
S4) extended (e.g. theorize analyse).

The skills are structured according to Miller's pyramid:
M1) know,

M2) know how to carry out
M3) be able to demonstrate, and
M4) be able to carry out in a professional manner.

Literature and other teaching aids

The ESC textbook of cardiovascular medicine

Camm, A. John; Lüscher, Thomas F.q (Thomas Felix); Serruys, P. W.

2nd ed. : Oxford ;a New York : Oxford University Press, cop. 2009. - xxiv, 1398 p.
ISBN:978-0-19-956699-0 (alk. paper) LIBRIS-ID:11746600

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