

Course syllabus for

# Ultrasound diagnostics 2 - Vascular, 7.5 credits

Ultraljudsdiagnostik 2 - Kärl, 7.5 hp

This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

Course code	1BA073
Course name	Ultrasound diagnostics 2 - Vascular
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Biomedical Laboratory Science
Level	G1 - First cycle 1
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Laboratory Medicine
Decided by	Programnämnd 6
Decision date	2012-11-06
Revised by	Education committee LABMED
Last revision	2017-09-28
Course syllabus valid from	Spring 2013

### Specific entry requirements

General entry requirements for higher education. Specific entry requirements: According to the programme curriculum of the study programme for biomedical analysts or the equivalent

## Objectives

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

- Account for the most common anatomy and the pathophysiology in the large arteries and the veins
- In genral terms describe the structure of various vascular ultrasound probes and the techniques used in peripheral circulation examination
- Identify the various anatomical structures, ultrasound images of the arteries and the veins, and account for where and how these images are recorded
- Account for various adequate vascular disorders, their aetiology, symptoms, pathophysiology, treatment and how they are diagnosed, with ultrasound and Doppler Technique
- Account for the most common projections and techniques to be used in various issues in vascular diagnostics, and the formulas, normal values and calculations to be applied
- Under supervision implement a complete duplex examination of the neck vessels with dimension and flow measurements of an individual with no vascular disorder. Under supervision also be able Page 1 of 3

to carry out commonly occurring peripheral pressure and pulse measurements

- Account for the technique behind and the use of methods for peripheral pressure measurement and microcirculation
- Receive and prepare patients for examination of vessels with ultrasound and be familiar with current routines for this
- Summarise the objectives in the Higher Education Ordinance of the Bachelor of Science in Biomedical Laboratory Science concerning assessment skills and approaches, and in clinical practice also be able to apply these

#### Content

The course comprises ultrasound technique for extravasal and intravasal examinations including transcranial ultrasound examination. Further, the use of the ultrasound technique in diagnosing artery and venous diseases is treated, at a general level. Methods of measurement for peripheral pressure and circulation measurement including microcirculation are discussed. The anatomy, physiology and pathophysiology of the major vessels are discussed based on ultrasound and Doppler images, but also based on various vascular disorders and their expected clinical findings. Clinical skills in the different measurement techniques are practiced throughout the course.

### **Teaching methods**

The course is given in the form of lectures, demonstrations, laboratory sessions and practical learning moments.

During part of the course a clinical rotation is performed on various Physiology clinics. During this practise the student is filling out a loggbook with information on examined patients, measurement of exams and description of exam routines in conjunction with the supervisor.

### Examination

Examination is given in the form of practical examinations and a written examination.

Demonstrations, laboratory sessions and practical parts are compulsory. In case of absence, an agreement concerning supplementation is made between the student and the responsible teacher . A re-examination session is provided in connection with the course, and during a re-examination week in August. Students without approved results after 4 completed examinations are offered to retake the course (or the parts without approved results). However, at most 6 examination sessions. If a student fails the laboratory session or the clinical practice, the student has the opportunity to redo these on one occasion

### **Transitional provisions**

Examination according to this syllabus will be provided during a year after a decision on close-down of the course or revision of the syllabus.

The course has been cancelled and was offered for the last time in the spring semester of 2013. Examination will be provided until the spring of 2018 for students who have not completed the course.

### **Other directives**

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

## Literature and other teaching aids

#### Klinisk fysiologisk kärldiagnostik

Jogestrand, Tomas; Rosfors, Stefan

Lund : Studentlitteratur : b Svensk fören. för klinisk fysiologi, 2002 - 396 s., xii pl.-s. i färg ISBN:91-44-02189-5 LIBRIS-ID:8394446

#### Library search

Jonson, Björn; Wollmer, Per; Brauer, Kerstin Klinisk fysiologi : med nuklearmedicin och klinisk neurofysiologi

3., [omarb.] uppl. : Stockholm : Liber, 2011 - 397 s. ISBN:91-47-10363-9 LIBRIS-ID:12239801 Library search

#### Kärlsjukdomar : lärobok i medicinsk angiologi

Lindgärde, Folke; Thulin, Thomas; Östergren, Jan

2., [väsentligt omarb. och uppdaterade] uppl. : Lund : Studentlitteratur, 2005 - 288 s. ISBN:91-44-03456-3 LIBRIS-ID:9759160 Library search

#### Kärlsjukdom : vaskulär medicin

Lindgärde, Folke; Thulin, Tomas; Östergren, Jan

3., [utvidg. och rev.] uppl. : Lund : Studentlitteratur, 2009 - 456 s. ISBN:978-91-44-05384-4 LIBRIS-ID:11573831

Library search

*Ejlertsson, G* Grundläggande statistik med tillämpningar inom sjukvård

Lund : Studentlitteratur, 2003