



DEPARTMENT OF MEDICINE, SOLNA

K2F5690, Age, Ageing and Cardiovascular Health, 1.5 credits (hec)

Ålder och kardiovaskulär hälsa, 1,5 högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus was approved by The Committee for Doctoral Education on 2023-12-27, and was last revised on 2026-02-16. The revised course syllabus is valid from spring semester 2026.

Responsible department

Department of Medicine, Solna, Faculty of Medicine

Prerequisite courses, or equivalent

No prerequisite courses, or equivalent, demanded for this course.

Purpose & Intended learning outcomes

Purpose

The aim of this course is to offer participants interested in vascular diseases an overview of the effect of age and aging on the vascular wall and the clinical readouts. We will go through the spectrum of vascular modifications that characterize healthy aging and those that associates to cardiovascular diseases, from coronary heart disease to vascular pathologies.

Intended learning outcomes

Upon completion of the course, the participants should be able to: 1) understand the difference between healthy aging and age related disease; 2) describe the pathophysiology of the most common cardiovascular diseases related to aging; 3) discuss the concept of frailty and 4) show an insight into the application of concept learned in their current and future research

Course content

The course will cover an introductory lecture on vascular biology in the elderly from physiology

to pathology. It will then cover the manifestations of aging in the heart, large vessels and the brain. One day will be devoted to discuss the concept of frailty and the interventions to de-frail elderly patients

Forms of teaching and learning

The course will be based on the reverse classroom model. Students will read selected papers in the morning that will be discussed with the teacher in the early afternoon. The student will be asked to prepare questions based on the articles they have read in the morning. The afternoon activities will include lectures, seminars given by a researcher expert in the field and group discussions on selected topics.

Language of instruction

The course is given in English

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

Attendance to the seminars and group work and discussion is mandatory as the discussion is part of the examination. The final written exam is also mandatory.

Forms of assessment

In order to pass the course, each participant needs to prove that s/he has reached the previously indicated learning outcomes of the course. The final grade (pass or fail) will be based on written exam written exam where the students have to write a short aessay on one topic related to the course content. Please note that the exam will be written at KI during the course hours on the last day of the course.

Course literature

Jaiswal S, et al. N Engl J Med 2014;371:2488-2498
 Franceschi C, Nature Review Endocrinology 2018;14: 576–590
 Chirinos J, et al JACC 2019;74:1237–1263
 Kirchenbaum GA, et al. J Immunological Sci. 2019;3: 14-20

Several papers will be read and discussed during the course and will also be part of the literature.