Course syllabus for

Degree project in Medicine, 30 credits

Examensarbete i medicin, 30 hp
This course syllabus is valid from autumn 2024.
Please note that the course syllabus is available in the following versions:
Autumn2010 , Spring2011 , Autumn2011 , Spring2012 , Autumn2012 , Spring2013 , Autumn2013 , Autumn2014 , Autumn2015 , Spring2016 , Spring2017 , Autumn2017 , Autumn2018 , Autumn2019 , Spring2020 , Autumn2020 , Spring2023 , Autumn2024

Course code	2LK028
Course name	Degree project in Medicine
Credits	30 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 Medical Epidemiology and Biostatistics
Decided by	Programnämnd 2
Decision date	2010-03-11
Revised by	Programme committee for study programme in medicine
Last revision	2024-03-18
Course syllabus valid from	Autumn 2024

Specific entry requirements

All higher education credits from semester 1-6.

A student failing due to shortage in knowledge, skills or attitudes, thus jeopardising patient safety and/or trust in medical care, can be assigned to a new clinical placement only after having completed objectives set in the individual plan.

Objectives

Aim
The aim of the course is that the student should deepen his/her understanding of the research process, develop a scientific attitude towards continuous development of medical knowledge and establish a basis for own research project.

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

Learning outcomes

Knowledge and understanding:
The student should

- show advanced theoretical knowledge and understanding of the chosen research domain within the knowledge field medicine (S3).
- demonstrate an understanding of the current research and development of the field and about the relationship between science and experience and its importance for the future profession (S3).
- be able to give an account of basic scientific methods in the area and argue for and against the possibilities and limitations of the methods (S3).

Skills:
The student should

- demonstrate the ability to on a systematic and independent way and with research-ethical reflection within the field of medicine, be able to identify and formulate research questions, plan, carry out, present and discuss scientific work in a report in which ability to analyse the project and integrate it into its theoretical contexts should appear (M3).
- independently and in a structured manner search, review critically, evaluate and use relevant information and demonstrate advanced ability to discuss new facts and issues from scientific, practical and theoretical points of view (M3).
- be able to present the study orally and discuss another student's project report and then give and receive feedback in a scientific and constructive way (M3).
- analyse and take a stand with regard to ethical aspects on research and development work (M3).

Attitude:
The student should

- assess his/her need of additional knowledge and take responsibility for his continuing professional development.
- act respectfully towards researchers, patients, other students, teachers and staff as well as take active responsibility for his/her own learning and professional development.

Content

The student should carry out a scientific project under supervision within the main field of medicine, that includes a clear research process in accordance to the aim of the course. The scientific basis for the main field of medicine include human structure and function in health and diseases, prevention of disease, and diagnostics measures and treatment of diseases and injuries. The project should include the following components in a research process: (a preliminary research question), literature search, critical review of literature, preparation of research questions, data collection, data processing, interpretation and presentation in the form of oral presentations and written reports. Critical review is also trained, when the student gives feedback on other students oral presentations and written reports and receives own feedback.

The project planning is already started the semester before the course starts, since the project choice must be made in good time before the semester. The student is responsible for finding a supervisor to plan a project. The project is described in the form of an established project plan form (PPF); Project Proposal Form), written by the supervisor in consultation with the student. Before the student can start the project, the PPF should be reviewed and accepted by the project coordinator, in order to ensure that the project is appropriate as student project.

The course starts subsequently with a compulsory course introduction and introductory lectures and workshops. The degree project is carried out as an independent individual project under supervision of a supervisor with at least PhD degree and with experience in the area of study. All written reports should be structured according to the course instructions for students (Studentinstruktion) in order to show that

the expected learning outcomes have been achieved and this takes place under direction of coordinators who follows student's projects over a semester.

The course itself is divided into two stages:

Stage 1: Planning and starting of project work
After the course has been started the student will give an oral and written study progress report at a seminar, during which the student also gives feedback on other student's project. The study progress report must be structured according to the "Studentinstruktion" (a background, material, method and started data collection and a time plan) The student's study progress report must be approved by the coordinator in order for the student to be able to continue the project.

*Stage 2:*Continued data analysis and compilation, and the final presentation of the study.
In the next stage of the course the student will continue to work with data collection, analyses and writing, and to finally complete the report.

Stage 2 includes:
1) a written seminar version of the thesis, on which coordinator provides feedback before the final thesis of the degree project.
2) Assessment of an oral presentation of the whole degree projectt
3) oral critical review on another student's presentation and seminar version of the thesis;

The seminar version of the thesis must contain all expected main parts according to the "Studentinstruktion" (abstract, introduction/background, materials and methods, results and discussion) in order for the students to be allowed to present the thesis orally and to receive final feedback from coordinator before examination.

The final version of the project thesis is assessed after the oral presentation, as its revision is partly based on given feedback.

Thematic day with a focus on feedback and popular oral communication. Individual self-evaluation of own professional development, and based on which an action plan is formulated together with mentor.

Teaching methods

Lectures and workshops
Projectwork
Seminars

Some teaching may be in English.

If the degree project is carried out outside Karolinska Institutet (in Sweden or abroad) the following applies:

- The student has a main supervisor on KI who has a formal collaboration with the department outside KI and a co-supervisor at the institution/workplace where the projects is carried out.
- Approved PPF is necessary ahead of departure.

Examination

The course is carried out in two stages. Stage 1 must have been completed before stage 2 can be approved.eted. All assessments are based on established criteria.

Mandatory requirements
Approved PPF (project proposal form)
Written and oral study progress report with formative assessment
Written seminar version with formative assessment
Feedback on other students' presentations in the same coordinator group.

Theme day with a focus on feedback and popular orThematic day with a focus on feedback and popular

scientific oral communication.al communication. Individual self evaluation and action plan with mentor.

Workshop in research ethics.

Examination
After formative assessment of written seminar version, summational examination in this order is arranged
1. an oral presentation of the seminar version at the examination seminar with another student as reviewer;
2. oral critical review on another student's presentation and seminar version of the report;
3. the final version of the thesis is assessed by examiner

In the case of major deficiencies in the final version of the report, the grade "Fail" is given. In the case of smaller shortcomings, student may be given an opportunity to make minor corrections according to the instructions of examiner, within a defined time frame, with the possibility of subsequent approval.

Project theses (seminar version and final version) submitted for examination after deadline will be assessed at the next allocated examination session.

Limitations on the number of examinations or practical training sessions:
Students who do not pass a regular examination are entitled to re-examination on five more occasions. If the student has failed six examinations/tests, no additional examination is given.
Each time that the student has participated in the same examination it is regarded as an examination session. An examination for which the student has registered, but not participated in, will not be counted as an examination.

The examiner may, with immediate effect, interrupt a student's clinical placement (or equivalent) if the student demonstrates such serious deficiencies in knowledge, skills or attitude that patient safety or patient confidence in healthcare is at risk. If a clinical placement is interrupted in this way the student is deemed to have failed that element and to have used up one clinical placement opportunity.

In such cases, an individual action plan should be set up stating which activities and tests are required before the student is qualified for a new clinical placement on the course.

If there are special grounds, or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus's regulations on the examination form, the number of examination opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes as well as the level of expected skills, knowledge and abilities may not be changed, removed or reduced.

Literature and other teaching aids

Mandatory literature

Möller, R; Shoshan, M; Danielsson, J, Wallberg, A

Studentinstruktion för kursen Examensarbete i medicin

Institutionen för medicinsk epidemiologi och biostatistik,

Course literature and other course material

Recommended literature
Each student will choos the rest of the course literature after discussion with the supervisor. However, we would like to recommend the following books:

Grunderna för ett vetenskapligt förhållningssätt inom medicinen

Nyrén, Olof; Garwicz, Martin; Shoshan, Maria; Nilsson, Kerstin

Första upplagan : Stockholm : Liber, 2018 - 385 sidor
ISBN:978-91-47-11400-9 LIBRIS-ID:21803176

Library search

Jansson, Rowena

English for scientific research : a practical guide to good science writing

1. uppl. : Lund : Studentlitteratur, 2013 - 182 s.
ISBN:978-91-44-08499-2 LIBRIS-ID:13908927

Library search

Lynöe, Niels; Juth, Niklas

Den medicinska etikens ABZ

Institutionen för odontologi, 2009