Course syllabus for

Degree project in Medicine, 30 credits

Examensarbete i medicin, 30 hp
This course syllabus is valid from spring 2017.
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 2
Last revision	2016-11-08
Course syllabus valid from	Spring 2017

Specific entry requirements

All credits from semester 1-6.

Objectives

Learning Outcomes

The aim of the course is that the student should deepen his understanding of the research process develop a scientific attitude vis-à-vis the medical knowledge and establish a basis for own research project.

Intended 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 (S3) and about the relationship between science and proven experience and its importance for the future profession.

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 a scientific work in a report in which ability to analyse the project and integrate it in its theoretical contexts should appear (M3).
• demonstrate advanced ability to review, evaluate and use relevant information critically and discuss new facts and phenomena also with limited information (M3).
• be able to present the study orally and discuss another student's project report and then give and receive feedback on a scientific and constructive way (M3).
• be able to integrate medical knowledge ethical and psychological aspects in the meeting with other professional groups and be able to reflect on own professional development (Professional skills) (M3).

Attitude: The student should
• be able to identify his need of additional knowledge.
• to consider the ethical aspects on scientific projects and development. demonstrate an understanding of the importance of
• collaboration and learning from others.

Content

The student should carry out a scientific project under supervision within the main field of medicine that includes a clear research process according to the aim of the course. The disciplinary foundation for main field of medicine include human structure and function in health and diseases, preventive of diseases and diagnostics 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 feedback.

Professional skills: The mentor day comprises the physician's professional attitude and responsibility in the meeting with other professional groups and in the meeting with the patient. In addition, student's self-evaluation is discussed with the mentor during that day.

Teaching methods

The project planning is already started the semester before the course starts (see description of the project choice below). The course starts subsequently with a compulsory course introduction and introductory lectures and workshops. The degree project is carried out as independent individual work 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 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 project choice must be made in good time before the semester. The student her/himself have to contact a supervisor and make an agreement about a project. The project is described in an established project plan form (project proposal form PPF), that is written by the supervisor after contact with the student. Before student can start the project, the PPF:en should be reviewed and accepted of coordinator, in order to ensure that the project is appropriate as student project. PPF should be submitted latest stated deadline the semester before the course.

The course itself is divided into three stages: Stage 1: Planning The student presents a work plan, structured according to the course instructions for students, first orally at a planning meeting where the coordinator and the supervisor participate, later orally and in writing at an work plan seminar when the student also gives feedback on other student's work plan. The student's work plan must be approved by the coordinator in order be able to continue his/her project.

Stage 2: Stage 2 comprises start of the project work and is completed with half time report. After approximately the half semester the students presents orally and in written a part of the project report and a progress report. Each student also gives feedback on another students presentation.

Stage 3: Continued data analysis and compilation, and the final presentation of the study. In the completing stage of the course, the student analyses his results, and completes the report. The work is presented partly orally at an examination seminar as the student also acts reviewer on another student's degree project partly in writing in the form of so-called seminar version of the report. The seminar version must contain all expected main areas according to the course instructions for the students, to be allowed to present the report orally and to receive the last feedback from coordinator before examination. The final version is examined first after the oral presentation.

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.
- The planning meeting with student, supervisor and coordinator must take place the semester before and in connection with review of PPF.
- Depart can not take place before passed PPF and completed planning meeting.

Examination

The course is carried out in three stages. For one stage to be accepted, the previous stage must have been completed. All assessments are made according to established criteria, available for student and supervisor.

Stage 1: Work plan and- seminar (formative assessment) At work plan seminar, coordinator gives feedback on the student's oral and written presentation of the work plan, and on the oral feedback on another students work plan.

Stage 2: Half time report and- seminar (formative assessment) After completed stage 1, the student presents in writing and orally a half time report including a progress report, and give at the seminar also oral feedback on another students half time report.

Stage 3: Examination seminar and final version (formative assessment and summational examination) After completed stage 2, stage 3 can be examined with (in stated order):
1) a seminar version of the completed report on which coordinator give feedback;
2) an oral presentation of the seminar version at the examination seminar with another student as reviewer;
3) oral critical review on another student's presentation and seminar version of the report;
4) based on the feedback the seminar version is completed an thereafter the final version of the report is examined;
5) a written reflection

At larger deficiencies in the final version of the report, the grade failed is given. At smaller deficiencies, student can be given possibility to within a defined time frame make limited corrections after the instructions of examiner with the possibility to be accepted subsequently.

Limited number of examinations or practical training sessions: A student who has failed in the regular examination is entitled to participate in five more examinations. If the student has failed six examinations/tests, no more examinations are offered. Each occasion the student participates in the same examination counts as an examination. Examination occasion for which the student has registered but not participated in, does not count as a examination occasion.

Compulsory participation: In addition to the examinations during stage 1-3 are participation is compulsory at the following occasions:

- student's planning meeting with supervisor and coordinator.
- Other students' presentations in the same coordinators group.
- PU-workshop.

Study results cannot be reported until the student has participated in compulsory course elements or compensated for any absence in accordance with instructions from the course coordinator. Absence can imply that the student can not compensate a compulsory part of the course until next time the course be given.

Transitional provisions

For a course that 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 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.

A student failing due to shortcoming 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.

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

Footnote

Aims concerning knowledge and understanding are structured according to the SOLO taxonomy: S1) simple (e.g. know, identify), S2) compound (e.g. account for, describe), S3) related (e.g. analyse, relate to), and S4) extended (e.g. theorise, analyse). Practical skills outcomes are structured according to Miller: M1) know, M2) know how to carry out, M3) be able to show, and M4) be able to carry out professionally.

Literature and other teaching aids

Mandatory literature

Möller, R; Shoshan, M

Studentinstruktion för kursen Examensarbete i medicin

Institutionen för medicinsk epidemiologi och biostatistik,

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

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:

Fletcher, Robert H.; Fletcher, Suzanne W.
Clinical epidemiology : the essentials

4. ed. : Philadelphia, Pa. : Lippincott Williams & Wilkins, 2005 - xv, 252 s.
ISBN:0-7817-5215-9 (alk. paper) LIBRIS-ID:9784446
Library search

Greenhalgh, Trisha
Att läsa vetenskapliga artiklar och rapporter : grunden för en evidensbaserad vård

1. uppl. : Lund : Studentlitteratur, 2012 - 309 s.
ISBN:978-91-44-07271-5 LIBRIS-ID:12543003
Library search

Holme, Idar Magne; Solvang, Bernt Krohn; Nilsson, Björn
Forskningsmetodik : om kvalitativa och kvantitativa metoder

2., [rev. och utök.] uppl. : Lund : Studentlitteratur, 1997 - 360 s.
ISBN:978-91-44-00211-8 LIBRIS-ID:8352553
Library search

Wallén, Göran
Vetenskapsteori och forskningsmetodik

Lund : Studentlitteratur, 1996 - 151 sidor
ISBN:91-44-36652-1
Library search

Björk, Jonas
Praktisk statistik för medicin och hälsa

1. uppl. : Stockholm : Liber, 2011 - 327 s.
ISBN:91-47-10343-4 (korr.) LIBRIS-ID:12055810
Library search

Oshima, Alice; Hogue, Ann
Writing academic English

4. ed. : White Plains, N.Y. : Pearson Longman, 2006 - xi, 337 s.
ISBN:978-0-13-152359-3 LIBRIS-ID:10190093
Library search

Svenska skrivregler

3., [utök.] utg. : Stockholm : Liber, 2008 - 263, [1] s.
ISBN:978-91-47-08460-9 LIBRIS-ID:10935499
URL: http://www.liber.se/productimage/large/4708460o.jpg
Library search

Lynöe, Niels; Juth, Niklas
Den medicinska etikens ABZ

Institutionen för odontologi, 2009