



MF9010E-Introductory Course to the medical PhD programme, Intro I 2015

Week 47 (16-20/11)	Monday Round Aud R-105 Domus Medica	Tuesday Round Aud R-105 Domus Medica	Wednesday Round Aud R-105 Domus Medica	Thursday Aud A1.1001. Domus Odontologica	Friday Aud A1.1001. Domus Odontologica
0900-0945	Welcome and introduction to the course Line M. Grønning-Wang	Philosophy of Science I: What is scientific knowledge? Bjørn Hofmann	Epidemiology Per Nafstad	Biomedicine and Bioinformatics Robert Lyle	Statistics Jon Michael Gran
1000-1045	Group work I (cont.)	Philosophy of Science II: Explanation and Causality Bjørn Hofmann	Epidemiology (cont.)	A critical review of research methodology Nina K Vøllestad	Statistics (cont.)
1100-1145	Presentation of group work	Philosophy of Science II: Explanation and Causality (cont.)	Qualitative research Anne-Lise Middelthon	Article workshop	Statistics (cont.)
1145-1230					
1230-1315	What is medical and life science research? Ludvig Munthe	Group work II	Workshop 2: Basic research Stem cells Jan Brinchmann	History of Medical Science Christoph Gradmann	Research Ethics Haakon Benestad
1330-1415	Methods in Medical Research Magne Nylenna	Presentation of group work	Translational research Ian Mills	Workshop 3: Clinical research General Practice Anh Thi Tran Nutrition Kjetil Retterstøl	Research Ethics cont.
1430-1515	Methods in Medical Research Magne Nylenna	Workshop 1: Health and society Minority health Anne Karen Jenum Health economics Tor Iversen	Molecular and Cellular biology Harald Stenmark	Medical Research Hanne Løvdaal Gulseth Surgical Research Jøran Hjelmæsæth	Research Ethics cont.
1530-1615	Philosophy of Science I: What is scientific knowledge? Bjørn Hofmann	Psychological research Deborah Reas			

Aim of the course

The overall aim of the Intro I course is to introduce basic knowledge in the philosophy, history, ethics and methods of science with specific focus on convergence and interdisciplinary approaches.

Medical research has become interdisciplinary. Cross-disciplinary cooperation and integration of multiple research fields has allowed the development of new knowledge and enabled new applications. This

development is often called convergence. In this course, we will exemplify convergence by showing how a multifaceted problem can be addressed from different angles. We have chosen morbid obesity as our case; this thematic area will be employed in order to give participants concrete examples of general principles and approaches. It should, however be noted that the course is not a formalized introduction to obesity research – the case merely exemplifies modern research trends.

Multiple, integrated methods and tools can be applied to elucidate this thematic area including randomized controlled trials, R&D initiatives in primary health care, municipal initiatives, programs for increased physical activity and cooperation with NGOs are examples. In the social context, prevention requires increased awareness in schools and in the public, as well as enhanced knowledge of nutrition, public health initiatives, product innovation, dissemination of healthcare products and political decision making.

This course provides an introduction to a variety of scientific perspectives and skills that are required to address such a complex issue. The course includes research within ethics and philosophy of science, epidemiology and statistics. In addition, genetic studies, basic research studies, cell physiology and pathophysiology, and studies of laboratory animals are introduced. The students will work in groups to elucidate the issue from their own point of view.

About the course

This one week course consists of lectures, 3 workshops and 2 group works and one “article workshop”.

- Before the start of the course, participants must send in a description of themselves and own research project. This description is actively used by the lecturers as examples (e.g. in the lecture “Methods in Medical Research”).

- **Group works** are linked to the previous lectures with discussion on thematic areas.

- **Workshops** with introduction to research in different medical disciplines with focus on research methodology and examples of research activities at UiO.

- **Article workshop.** Before the Article workshop on Thursday, the participants must find a PubMed registered article *within own research field with focus on obesity*. The article is distributed to and presented to fellow group members in the Article workshop with a critical view on scientific methods and controls.

Course Exam

The course exam has 3 parts (use Font 12, Times new Roman):

1. Make a summary of your results from group work 1 (Monday) (max 1 page)
2. Prepare a summary of the article you presented at the Article workshop with a critical view on research question, method(s) used to address the hypothesis, conclusions drawn and strengths and weaknesses of the study (max 1 page)
3. Write a short reflection note on one of the following themes (minimum 2 pages, max 4 pages):

- Ethical challenges in medical research
- Convergence in life science and medical research. Possibilities and challenges
- Causality in medical research

You may use your own research, obesity (or any other topic) as example. Draw on perspectives which have been presented during this course.

Each question shall be answered individually. However, you may discuss the exam with other candidates, your supervisor or other researchers in your group. Use references (litterature, lectures) in all 3 parts of the exam.

The exam shall be downloaded in Fronter no later than 2 weeks after the end of the course.