



**Karolinska
Institutet**

Course syllabus for

Diet and physical activity - interventions and digital health, 8 credits

Kost och fysisk aktivitet - interventioner och digital hälsa, 8 hp

This course syllabus is valid from spring 2025.

Course code	4NT016
Course name	Diet and physical activity - interventions and digital health
Credits	8 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Nutrition Science
Level	AV - Second cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Medicine, Huddinge
Decided by	Education committee BioNut
Decision date	2024-06-17
Course syllabus valid from	Spring 2025

Specific entry requirements

At least grade pass for the course "Diet and health - scientific evidence, recommendations and sustainability" (4NT000, 4NT021) within the Master's Programme in Nutrition Science.

Objectives

After completing the course, the student should be able to:

- design and plan and evaluate an intervention in nutrition and physical activity, based on existing evidence and theories of behavioural change and apply the steps according to the chosen methodological model.
- critically analyze and discuss intervention studies in terms of study design, theoretical basis, statistics, ethics and interpretation of results, with special emphasis on interventions that utilize digital health.
- suggest and plan for the carrying out and evaluation of an intervention study in nutrition and physical activity.
- write a study protocol describing the proposed intervention study (background, method and discussion).
- suggest and motivate a suitable implementation framework for the suggested study.
- identify and suggest different funding opportunities for different types of research projects and

health promotion initiatives, and be familiar with the structure of such an application.

- analyze and discuss ethical aspects in relation to intervention studies, based on research ethics theories and principles.
- be familiar with the structure of an ethical application and its governing body.
- apply appropriate statistical tests to analyze data from intervention studies and be able to interpret the results.

Content

The course aims to give the student a deeper understanding and knowledge in intervention studies in the field of nutrition and physical activity, especially interventions that use tools in digital health (eHealth and mHealth). The course will cover study planning, study design (randomized controlled trials), and evaluation (data analyses and interpretation of results). During the course, the students will write a study protocol for a randomized controlled intervention study. The course will discuss how to develop the components of an intervention, which methods that are used to measure outcome measures, and how to evaluate the effectiveness of the intervention. The students present their study and may also object to another group's study. This course will also cover behaviour change models and techniques, such as motivational interviewing. The course also deals with different funding opportunities for research projects and health promotion initiatives and how such an application is structured.

Teaching methods

This course consists of seminars, group work, lectures, exercises and discussions and opposing on another groups project plan.

Examination

The examination consists of a written exam (graded Pass/Fail), and a group work (graded Pass/Fail) and an individual written report (graded Pass with distinction/Pass/Fail). Grading is based on the individual written report. To pass the course, all assignments must fulfil the criteria for Pass. The grading criteria for all examinations are provided on Canvas.

In the case a student fails an assignment, the individual assignment can be complemented to get a Pass on that individual assignment. The assignment can be resubmitted a maximum of five more times. After six failed assignments, no further examination opportunities will be given for that assignment. If the student has not submitted complementation at given deadline, grad Fail is given. A student who has failed two examinations for a course or part of a course, is entitled to have another examiner appointed unless special reasons speak against it.

Compulsory participation:

Assignments and seminars are compulsory. The examiner assesses if and, in that case, how absence from compulsory parts can be compensated. Before the student has participated in all compulsory parts or compensated absence according with the examiner's instructions, the student's study results cannot be finalized. Absence from a compulsory activity may result in that the student cannot compensate absence until the next time the course is given.

If there are special reasons, or need for adaption for a student with a disability, the examiner may decide to depart from the syllabus's regulations on examination form, number of examination opportunities, possibility of complementation of or exemption from compulsory activities, etc. Content and learning outcomes as well as the level of expected skills, knowledge and abilities must not be altered, removed or lowered.

Other directives

The course language is English.

Literature and other teaching aids

Reports, articles and other prescribed literature are listed at course start and will be available electronically.