



**Karolinska  
Institutet**

Course syllabus for

# **Diet, physical activity and disease prevention - interventions, mHealth and eHealth, 15 credits**

Kost, fysisk aktivitet och sjukdomsförebyggande - interventioner, mHälsa och eHälsa, 15 hp

This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

Please note that the course syllabus is available in the following versions:

Spring2022 , Spring2023 , Spring2024

Course code	4NT003
Course name	Diet, physical activity and disease prevention - interventions, mHealth and eHealth
Credits	15 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 Biosciences and Nutrition
Decided by	Education committee BioNut
Decision date	2021-08-19
Revised by	Education committee BioNut
Last revision	2022-10-31
Course syllabus valid from	Spring 2023

## **Specific entry requirements**

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

## **Objectives**

Part 1: Diet, physical activity and disease prevention, 5 credits

After completion of the course, the student should be able to:

- describe and discuss the prevalence and trends of diet-related global diseases and their determinants, with focus on diet and physical activity.
- identify and describe different surveillance and monitoring systems for these diseases.
- account for relevant organizations and apply policy documents and action plans in the field of

- public health nutrition.
- discuss the role of public health monitoring and initiatives in the area of diet and physical activity in relation to the prevention of global non-communicable diseases.

## Part 2: Interventions, mHealth and eHealth, 10 credits

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

- design, plan and evaluate a mHealth and eHealth intervention 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 eHealth and mHealth interventions.
- write a study protocol for an intervention study, including an introduction, methods and discussion.
- create an overall project plan to carry out an intervention study (time plan, personnel, different professions)
- suggest and motivate a suitable implementation theory 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 nutrition research, 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 is divided into two parts that are examined and graded separately, comprising 5 and 10 credits, respectively.

### **Diet, physical activity and disease prevention, 5.0 hp**

Grading scale: VU

Part 1 deals with diet-related global diseases, their prevalence, trends and determinants with focus on diet and physical activity. Different surveillance and monitoring systems for these diseases are discussed as well as relevant organizations, policy documents and action plans in the field of public health nutrition. Examples of public health monitoring and initiatives in the area of diet and physical activity in relation to the prevention of global non-communicable diseases are discussed.

### **Interventions, mHealth and eHealth, 10.0 hp**

Grading scale: VU

Part 2 aims to give the student a deeper understanding and knowledge in intervention studies in the field of nutrition and physical activity, especially interventions delivered through the internet (eHealth) or mobile phone technology (mHealth). This course will cover study planning, study design (randomized controlled trials), and evaluation (data analyses and interpretation of results). The students will write a project plan for an intervention study which will include the following three phases: planning, implementation and evaluation. The students will present their project plans and will also be opponents on another groups project plan. During the course, how to develop the components of an intervention as well as how to evaluate whether it was effective or not will be discussed. This course will also cover behaviour change models and techniques (for example motivational interviewing) as well as knowledge on how to develop interventions utilizing the internet and mobile phone technology. 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 of part 1 consists of active participation in group work (graded Pass/Fail) and an individual assignment (graded Pass with distinction/Pass/Fail). Grading of part 1 is based on the individual assignment. The examination of part 2 consists of oral and written assignments and a group work (graded Pass/Fail) and an individual written report (graded Pass with distinction/Pass/Fail). Grading of part 2 is based on the individual written assignment. For grade Pass with distinction on the entire course, grade Pass with distinction on part 2 is required. 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 adaptations 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.

A course evaluation will be conducted according to guidelines decided by the Board of Higher Education at KI. Oral evaluation will be carried out during the course.

## Literature and other teaching aids

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