



**Karolinska  
Institutet**

Course syllabus for

# **Nutrition, the nutrients and metabolism, 7.5 credits**

Grundläggande näringsfysiologi, 7.5 hp

This course syllabus is valid from autumn 2024.

Course code	1QA145
Course name	Nutrition, the nutrients and metabolism
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	First cycle, in-depth level of the course cannot be classified
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Medicine, Huddinge
Decided by	Education committee MedH
Decision date	2024-02-28
Course syllabus valid from	Autumn 2024

## **Objectives**

After completing the course the students should be able to:

- Describe the physiological function and metabolism of the macronutrients.
- Explain the energy metabolism and evaluate variations in energy demands due to physical activity level, age and gender as well as physiological and health status.
- Describe the essential micronutrients; their physiological functions, bioavailability, mechanisms of absorption, metabolism, excretion and storage, food sources and relationship to the maintenance of health.
- Describe causes and symptoms of malnutrition and define possible causes.
- Describe the nutrient recommendations, the rationale for them and their application areas.

## **Content**

The key topics are taught in the form of prerecorded lectures followed by study assignments and mandatory discussion assignments and is examined by a written exam. The topics include introduction to the digestive system, the macro nutrients and the micro nutrients and their metabolism, energy metabolism and nutrient recommendations. This is integrated with discussions about risk groups, symptoms of deficiencies, food sources and supplements.

## Teaching methods

The course includes prerecorded lectures, discussions, study assignments and discussion assignments.

## Examination

The course is examined by a written examination at the end of the course.

Compulsory participation:

Discussion assignments are compulsory. The course director assesses if and, in that case, how absence can be compensated.

Limited number of examinations or practical training sessions:

The student has the right to write the exam six times. The number of times that the student has participated in one and the same examination is regarded as an examination session. Submission of a blank examination is regarded as an examination. An examination for which the student registered but not participated in, will not be counted as an examination.

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.

## Transitional provisions

In cases where the course ceases or undergoes extensive changes, the student has the right to be examined in accordance with this course syllabus within two years.

## Other directives

Language of instruction: Swedish.

This course replaces the course Nutrition, the nutrients and metabolism, 7.5 credits (1QA096) and cannot be included in a degree together with the latter course.

## Literature and other teaching aids

*Whitney, Eleanor Noss; Rolfes, Sharon Rady*

### Understanding nutrition

14. ed. : Stamford, Conn. : Cengage Learning, cop. 2016 - xxii, 687, [254] s.

ISBN:9781285874340 LIBRIS-ID:17505590

[Library search](#)

### Nordic Nutrition Recommendations 2012 : Integrating nutrition and physical activity

Nordic Council of Ministers, 2014

LIBRIS-ID:16556096

### Näringslära för högskolan

*Berg, Christina; Ellegård, Lars; Larsson, Christel*

Sjunde upplagan : Stockholm : Liber, [2021] - 494 sidor

ISBN:9789147131075 LIBRIS-ID:kzpg8wbhhtkzbrvs

[Library search](#)