



**Karolinska  
Institutet**

Course syllabus for

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

Grundläggande näringsfysiologi, 7.5 hp

This course syllabus is valid from spring 2012.

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

Autumn2011 , Spring2012 , Autumn2015 , Autumn2019 , Spring2022

Course code	1QA096
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	Fail (U), pass (G) or pass with distinction (VG)
Department	Department of Biosciences and Nutrition
Decided by	Styrelsen för utbildning
Decision date	2011-02-10
Revised by	Styrelsen för utbildning
Last revision	2011-11-18
Course syllabus valid from	Spring 2012

## **Objectives**

After completing the course the students should be able to:

- o Describe the physiological function and metabolism of the macronutrients.
- o 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.
- o Describe the essential micronutrients; their physiological functions, bioavailability, mechanisms of absorption, metabolism, excretion and storage, food sources and relationship to the maintenance of health.
- o Describe causes and symptoms of malnutrition and define possible causes.
- o Describe the nutrient recommendations, the rationale for them and their application areas.

## **Content**

The key topics are taught in lectures followed by seminars and 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. An in-depth individual work regarding common nutrient deficiencies is performed during the course.

## Teaching methods

The course includes lectures, discussions, an individual assignment and student presentations.

## Examination

The course is examined by a written examination at the end of the course. Compulsory participation: Seminars and presentations 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.

## Literature and other teaching aids

*Whitney, Eleanor Noss; Rolfes, Sharon Rady.*

### Understanding nutrition

11. ed. : Belmont, CA : Thomson/Wadsworth, cop. 2008 - 1 v. (various pagings)

ISBN:9780495116868 LIBRIS-ID:10563561

[Library search](#)

### Nordic Nutrition Recommendations 2004 : integrating nutrition and physical activity

4th edition : Copenhagen : Nordic Council of Ministers, Council of Ministers,c 2004 - 435, [1] s.

ISBN:92-893-1062-6 LIBRIS-ID:9851293

[Library search](#)

*Abrahamsson, Lillemor; Aunver, Kristjan*

### Näringslära för högskolan

5 : Stockholm : Liber, 2006 - 461

ISBN:91-47-05355-0 LIBRIS-ID:10125744

[Library search](#)