



**LUNDS UNIVERSITET**  
Lunds Tekniska Högskola

*Course syllabus*

## **Livsmedelskemi och nutrition** **Food Chemistry and Nutrition**

**KLGN30, 7,5 credits, A (Second Cycle)**

**Valid for:** 2023/24

**Faculty:** Faculty of Engineering, LTH

**Decided by:** PLED B/K

**Date of Decision:** 2023-04-18

### **General Information**

**Main field:** Food Technology and Nutrition.

**Main field:** Food Systems.

**Compulsory for:** B4-lm, MLIV1

**Elective Compulsory for:** MLSA1, MLSA2

**Language of instruction:** The course will be given in English

### **Aim**

- the aim of the course is to describe the chemical and nutritional properties of food components,

### **Learning outcomes**

*Knowledge and understanding*

For a passing grade the student must

Be able to:

- understand the nutritional chemical and physical-chemical properties of foods.
- understand the digestion of food and its nutritional consequences
- describe basic concepts of nutrition, chemical and sensory analysis of foods.

*Competences and skills*

For a passing grade the student must

Be able to:

- evaluate relations between the chemical composition and the properties of foods.

### *Judgement and approach*

For a passing grade the student must

to judge information about relations between the chemical composition of food and its experienced, technological and nutritional quality

## **Contents**

The course will bring knowledge about:

- nutritional, chemical and physical-chemical properties of protein, fat and carbohydrates in food as well as the role of water for the properties of foods.
- digestion of food
- contribution from different food components to the structure of foods at a microscopic and a macroscopic level.
- chemical and enzymatic reactions, for example lipid oxidation, the Maillard reaction and caramelisation.
- basic chemistry of taste, flavour and colour.
- different types of food analysis.
- the correlation between food components and health

The course includes lectures and other activities:

- Seminar exercises cover for example different types of food analysis and evaluation of relations between the chemical composition of food and its experienced, technological and nutritional quality
- The practical parts include basic sensory analysis.
- Laborative work

## **Examination details**

**Grading scale:** TH - (U,3,4,5) - (Fail, Three, Four, Five)

**Assessment:** Assignments, written exam and practicals. The Th-scale is based on the written exam.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

## **Admission**

**Assumed prior knowledge:** KOKA25 Organic Chemistry, KBKA10/KBK011 Biochemistry.

**The number of participants is limited to:** No

**The course overlaps following course/s:** KLG060

## **Reading list**

- Coultate, T.P: Food – The Chemistry of its Components. The Royal Society of Chemistry, 2008, ISBN: 978-0-85404-111-4.
- Michel J Gibney: Introduction to human nutrition. Willey Blacwell, 2009, ISBN: 9781444322965.

## **Contact and other information**

**Course coordinator:** Anne Nilsson, [anne.nilsson@food.lth.se](mailto:anne.nilsson@food.lth.se)

**Course homepage:** <https://www.ple.lth.se/en/>