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 nutrional 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 nutrionional consequences
- describe basic concepts of nutrtion, 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

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