LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Livsmedelskemi II
Food Chemistry II

YTHF15, 7,5 credits, G2 (First Cycle)

Valid for: 2023/24
Faculty: Faculty of Engineering, LTH
Decided by: PLED LIV
Date of Decision: 2023-04-17

General Information

Main field: Food Science.
Compulsory for: KLMT1
Language of instruction: The course will be given in Swedish

Aim

The aim of the course is to provide in-depht knowledge of food chemistry of water, lipids, carbohydrates and proteins.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

- be able to describe and explain the properties and functions of water, lipids, carbohydrates and proteins in raw materials and food, as well as their changes in food processing,
- be able to account for and apply knowledge about oxidation, dispersions, gel formation, emulsions, melting properties and crystallization in connection with the manufacture of various food products,
- have knowledge and understanding of the significance of a food in texture and rheology.

Competences and skills
For a passing grade the student must

- describe the structure of a food product.

Judgement and approach
For a passing grade the student must

- realize that knowledge in chemistry facilitates a deeper understanding of food properties.

Contents

The course will provide an in-depth understanding of how food is structured.

The course contains sections on lipids (structure, properties and function in food, function and changes in food processes, during storage, cooking; extraction from oil plants, production of cooking fat, chocolate, etc.), carbohydrates (structure, properties and function in raw materials and food, food processes , cooking; sugar production, sweeteners) and proteins (structure, division, properties and function of raw materials and foods, function and changes in food processes and cooking) and additives. The course also covers the texture and rheology of food. In addition, drinking water supply, water purification and water quality are treated.

The course is further based on knowledge from Food Chemistry I (YTHA71).

Examination details

Grading scale: UG - (U,G) - (Fail, Pass)
Assessment: Written examination, laboratory experiments.

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.

Parts
Code: 0121. **Name:** Laboratory Experiments.
Credits: 2. **Grading scale:** UG. **Assessment:** Attendance at laboratory experiments and approved written reports
Code: 0221. **Name:** Written Examination.
Credits: 5,5. **Grading scale:** UG. **Assessment:** Approved written examination

Admission

Assumed prior knowledge: YTHA71 Food Chemistry I
The number of participants is limited to: No
The course overlaps following course/s: YTHA76, YTHA70

Reading list

- Furugren, Bo: Matkemi med kemiska grunder , Livsmedelskemi och matkunskap. 2015. Compendium.

Contact and other information

Course coordinator: Birgitta Åsman, birgitta.asman@food.lth.se
Course homepage: https://www.ple.lth.se/en/
Further information: Participation during laboratory exercises and guest lectures are

compulsory. In case of legal impediment the student should accomplish an individual task.