



**LUNDS UNIVERSITET**  
Lunds Tekniska Högskola

*Course syllabus*

# **Livsmedelskemi I**

## **Food Chemistry I**

**YTHA71, 7,5 credits, G1 (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**

To give basic knowledge in food chemistry.

### **Learning outcomes**

*Knowledge and understanding*

For a passing grade the student must

- understand basic chemical concepts such as the structure of the atoms, the composition of molecules, chemical bonding, the periodic table and chemical reactions.
- be able to explain and apply phenomena and concepts such as solubility, hydrophilic, hydrophobic, hydrolysis, condensation, monomer, dimer, polymer, the concepts pH, acid, base, oxidation, reduction, amount of substance, etc.
- be able to describe how water and other nutrients can be bound in food.
- be able to describe the building blocks of food and understand the connection between the structure and content of food.

*Competences and skills*

For a passing grade the student must

- be able to measure water content and pH
- be able to perform calculations concerning concentrations and quantities.

### *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 introduces foods and what these contain in broad outline and provides the basics of food chemistry. Basic chemistry deals with the structure of the atom, the composition of molecules, chemical bonding and chemical reactions. The basics of food chemistry deal with the structure and most important properties of water, lipids, carbohydrates and proteins. Laboratory work is an important tool for increasing understanding of how foods are structured and what functional properties they have.

## **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:** 0115. **Name:** Written Examination.

**Credits:** 5,5. **Grading scale:** UG. **Assessment:** Passed written examination.

**Code:** 0215. **Name:** Laboratory Experiments .

**Credits:** 2. **Grading scale:** UG. **Assessment:** Attendance at laboratory experiments and approved written reports.

## **Admission**

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

**The course overlaps following course/s:** YTHA70

## **Reading list**

- Bo Furugren: 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:** Laboratory works, guest lectures and study visits are compulsory. In case of legal impediment the student should accomplish an individual task with equivalent content.