

Course size (nominal values; actual values may depend on programme)

Credits 5.0 Study time 150 h Contact hrs 60.0 h

Course offerings and teaching methods in academic year 2019-2020

A (semester 1)	English	guided self-study	6.0 h
		lecture	24.0 h
		practicum	30.0 h

Lecturers in academic year 2019-2020

Cirkovic Velickovic, Tanja	KR01	lecturer-in-charge
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Offered in the following programmes in 2019-2020

Bachelor of Science in Food Technology	crdts	offering
	5	A

Teaching languages

English

Keywords

Food, Agricultural raw materials, Composition, Properties, Degradation reactions, Nutritional value, Food safety

Position of the course

Food chemistry deals with the study of the chemical, biochemical and physicochemical processes involved in agricultural raw materials and in foodstuffs, and during the transformation of agricultural raw materials into derived products. This knowledge is essential for students who want to specialize further as a MSc in Food Technology or MSc in Food Science and Nutrition.

Contents

- 1 Introduction and definitions
- 2 Water
- 3 Proteins
- 4 Enzymes
- 5 Lipids
- 6 Carbohydrates
- 7 Vitamins
- 8 Pigments
- 9 Other constituents
- 10 Additives, residues and contaminants

Practical sessions: physicochemical characterization of foods; carbohydrates, proteins, lipids (chemical properties, isolation, reactivity).

Initial competences

Basic knowledge of inorganic chemistry, organic chemistry and biochemistry is required.

Final competences

- 1 The student will acquire thorough and fundamental knowledge of the chemical properties of and the chemical reactions taking place in agricultural raw materials and their derived products .
- 2 The student will be able to argue analytically and synthetically about chemical properties of and chemical reactions in agricultural raw materials and their derived products.
- 3 The student basic knowledge about the chemical analysis of agricultural raw

materials and their derived products.

- 4 The student will be able to collect information about the chemical composition of agricultural raw materials and their derived products, to process this information and to report it and to practice laboratory techniques about the basic chemical analysis of agricultural raw materials and their derived products.

Conditions for credit contract

Access to this course unit via a credit contract is unrestricted: the student takes into consideration the conditions mentioned in 'Starting Competences'

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Guided self-study, lecture, practicum

Learning materials and price

Belitz, H.-D. and Grosch, W. (1999). Food Chemistry, Springer, Berlin, ISBN 3-540-64692-2

References

Course content-related study coaching

Interactive counselling through Minerva. Individual electronic appointment booking

Evaluation methods

end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period

Written examination with open questions, written examination with multiple choice questions

Examination methods in case of periodic evaluation during the second examination period

Written examination with open questions, written examination with multiple choice questions

Examination methods in case of permanent evaluation

Written examination with open questions, participation, report

Possibilities of retake in case of permanent evaluation

examination during the second examination period is not possible

Extra information on the examination methods

Following practical session a written report will be submitted for evaluation and it will contribute to the final mark with 10%. Periodic evaluation (twice during the semester) in a form of a written performance assessment test with open questions will contribute to the mark with 10%. Absence from practical session will result in a maximum mark 9/20.

Calculation of the examination mark

Written examination with open questions 60%
Written examination with multiple choice questions 20%
Performance assessment 10%
Lab Report 10%