



Course Specifications

Valid as from the academic year 2016-2017

Food Chemistry (O000103)

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 2016-2017

A (semester 1)	lecture	22.5 h
	practicum	22.5 h

Lecturers in academic year 2016-2017

Cirkovic Velickovic, Tanja	KR01	lecturer-in-charge
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Offered in the following programmes in 2016-2017

	crdts	offering
Bachelor of Science in Food Technology	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

Initial competences

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

Final competences

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 and basic knowledge about the chemical analysis of agricultural raw materials and their derived products.

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, 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 determined after successful competences assessment

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

References

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

Connie M. Weaver, James R. Daniel, (2003) The Food Chemistry Laboratory: A Manual for Experimental Foods, Dietetics, and Food Scientists, Second Edition, ISBN 9780849312939

Course content-related study coaching

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

Examination methods in case of permanent evaluation

Participation, job performance assessment, report

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible in modified form

Calculation of the examination mark

Written examination with open questions 50%

Written examination with multiple choice questions 30%

Participation 5%

Report 10%

Performance assessment 5%