
Course title: FOOD QUALITY ANALYSIS AND ASSESSMENT

ECTS credit allocation (and other scores): 3

Semester: autumn

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Medical and health sciences

Language: English

Number of hours per semester: 45 (30 lectures and 15 classes)

Course coordinator/ Department and e-mail: Joanna Klepacka/Department of Commodity Science and Food Analysis,
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Type of classes: classes and lectures

Substantive content

CLASSES: Laboratory analysis include the determination of food components by selected physicochemical methods, mainly those that are used as basic, routine and reference. During the classes students independently perform analytical determinations used to establish the composition of the food and the assessment of its quality. On the basis of the obtained results, they evaluate the accuracy and precision of the determination, as well as the nutritional value, freshness and durability of the examined food products. They can also propose an appropriate analytical method for a specific purpose.

LECTURES: The program of lectures covers the characteristics of analytical schemes used in the determination of basic food ingredients: theoretical basis and course of the analytical procedure and ways of interpreting the obtained results. Learning content includes presentation of the principles and the course of such analytical determinations as: water content, density, acidity, amount of saccharides, lipids (determination of their amount and freshness), proteins and selected minerals. Students also learn the types of analytical errors and ways to avoid them.

Learning purpose: basis and the course of analytical procedures and results interpretation leading to food quality assessment

On completion of the study programme the graduate will gain:

Knowledge: understanding the rules of basic methods used in food analysis and its evaluation

Skills: carrying out analytical determinations in order to know the quality of food

Social Competencies: critical assessment of own work

Basic literature: 1. Nielsen S. 2017. Food Analysis. Springer International Publishing, Cham (Series ISSN: 1572-0330 ; ISBN: 978-3-319-45774-1 ; E-ISBN: 978-3-319-45776-5; DOI: 10.1007/978-3-319-45776-5)

Supplementary literature: 1. Picó Y. 2012. Chemical analysis of food: techniques and applications. Academic Press (ISBN 978-0-12-384862-8, doi: <https://doi.org/10.1016/C2010-0-64808-5>), 2. TrAC Trends in Analytical Chemistry. Science Direct: <https://www.sciencedirect.com/journal/trac-trends-in-analytical-chemistry/issues>. 3. Journal of Food Composition and Analysis. Elsevier: <https://www.journals.elsevier.com/journal-of-food-composition-and-analysis>

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 45

Student's independent work: 30