

Course title: FOOD QUALITY ANALYSIS AND ASSESSMENT

ECTS credit allocation (and other scores): 5

Semester: autumn

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

Branch of science: Agricultural sciences

Language: English

Number of hours per semester: 30

Course coordinator/ Department and e-mail: Joanna Klepacka/Department of Commodity Science and Food Analysis, e-mail: klepak@uwm.edu.pl

Type of classes: classes

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#### Substantive content

**CLASSES:** Laboratory analysis include the determination of the composition of food products by selected physicochemical methods, mainly those that are used as basic, routine. During the course, students learn the principles of determination of: water content, density, acidity, level of saccharides, lipids (determination of their quantity and freshness), proteins, selected minerals, and methods of appropriate interpretation of the obtained results (to determine the correctness of the analysis and quality assessment of analysed product).

**Learning purpose:** Characteristics of the analytical procedures used in the determination of the basic components of food: theoretical basis and practical course of analytical procedures, methods, results interpretation leading to food quality assessment and determining the precision of measurement.

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On completion of the study programme the graduate will gain:

**Knowledge:** Student knows and understands the rules of basic methods used in determination of the main chemical components of food and is able to propose a specific analytical procedure adapted to the type of analysed product.

**Skills:** Student uses the basic laboratory and measuring equipment to analyze the composition of food, makes results calculations and draws conclusions from experiments.

**Social Competencies:** Student organizes work in the laboratory, working alone and cooperating with colleagues from the research team

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**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>

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The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 30

Student's independent work: 95