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| Course: | Quality and safety of agricultural products |
| Course id:3ОOP7O34 |
| Number of ECTS:4 |
| Teachers: | Igor Jajić, PhD, Assistant Professor, VojislavaBursić, PhD, Assistant ProfessorVojislava Bursić, PhD, Assistant Professor |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures:3 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | Chemistry, Biochemistry, Physiology |
| 1. Educational goal- The meaning of organic food quality comprises controlled and certified production based on EU regulations and IFOAM standards. Introducing students to the field of food safety, understanding the GMP and GHP programs which are the basis of efficient management of food safety through HACCP application.
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| 1. Educational outcomes - Acquired knowledge on methods of assessing the quality and safety of agricultural products, regardinghuman health, through strict adherence to the valid legislations. Thebasic knowledge of different chemical and microbiological contaminants of raw materials, food and water, their sources and negative effects on health and quality, including the measures which need to be taken to avoid this kind of contaminants in products.
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| 1. Course content

*Theoretical lessons:*Food definition, division by type, manner of use and nutrition value. Food quality definition, morphological and chemical characteristics. Definition of organic food quality. Quality parameters, content of desirable and undesirable substances. Holistic approach to the organic food quality assessment, biocristalization method. Quality factors: sensory, technological, nutritious, hygienic-toxicological, ethical. Meat: significance, technological and nutrition meat quality. Biochemical process in muscles *postmortem*, postmortem glycolysis and meat seasoning. Eggs: structure and chemical composition, eggs quality preservation, processing. Honey: chemical composition, antibacterial properties, types of honey according to the origin and obtaining methods. The most important honey contaminants. GMP, GHP and HACCP. Food safety legislations. European food legislations (EC 178/2002), EFSA, RASFF. ISO Standards 9000 and 22000. Food safety law RS 41/2009. Toxicological foodstuff quality. Foodstuff contaminants: pesticides, polychlorinated biphenyls, heavy metals, dioxins and mycotoxins. *Practical classes:* Introduction to the instrumental laboratory techniques: spectrophotometry, chromatography (TLC, HPLC and GC). Determination of C vitamin in vegetables and fruit, isolation and identification of plant pigments, sugars and proteins. Introduction to the biocristalization method. Determinationof meat water binding capacity. Lipids, determination of total lipids, determination of lipid soluble vitamins. Glycogen determination in meat.Foodstuff colour, determination of total pigments, determination of meat colour. Honey quality, determination of HMF. Toxicological foodstuff quality, mycotoxins and heavy metals determination. |
| 1. Teaching methods

The theoretical classes are conducted through lessons, presentations and other didactic tools. Practical classes concern individual student work and demonstrative/illustrative methods.Class discussion conducted by teacher. Practical knowledge testing. Consultations related to theoretical/ practical lessons. |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Practical classes | Yes | 5 | Oral part of the exam | Yes | 50 |
| Activities in classes | No | 5 |  |
| Tests | Yes | 40 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Lazić B., Babović D. | Organskapoljoprivreda | Institutzaratarstvo i povrtarstvo, Novi Sad | 2008 |
|  | Budimka N, Mirosavljev M. | Higijenahrane | Medicinskifakultet, Univerzitet u NovomSadu | 2005 |
|  | Pribiš V. | Nutritivneosobinehrane | Tehnološkifakultet, Univerzitet u NovomSadu | 1999 |
|  | Tojagić S., Mirilov M. | Hranaznačaji i tokovi u organizmu | Maticasrpska, Novi Sad | 1998 |
|  | Rade R., PetrovićLj. | Tehnologija mesa i nauka o mesu | Tehnološkifakultet, Univerzitet u NovomSadu | 1997 |
|  | D'Mello J.P.F. Ed | Food safety: Contaminants and Toxins | Cab International | 2003 |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationUNDERGRADUATE ACADEMIC STUDIES (BACHELOR) INORGANIC PRODUCTION |
| Table 5.2 Course specification |