

Study Programme: Biotechnology
Course Unit Title: Quality management in biotechnology
Course Unit Code: DBI06
Name of Lecturer(s): Full Professor Dragoljub Cvetković, Associate Professor Senka Popović, Assistant Professor Aleksandra Ranitović
Type and Level of Studies: Master academic studies
Course Status (compulsory/elective): Elective
Semester (winter/summer): summer
Language of instruction: English
Mode of course unit delivery (face-to-face/distance learning): Face-to-face
Number of ECTS Allocated: 6
Prerequisites: None
<p>Course Aims:</p> <p>The aim of the course is to acquire knowledge about modern concept of safety and quality management in biotechnology, about biological, chemical and physical contaminants, prerequisite required programs for food safety and quality (good manufacturing, hygienic and laboratory practice), integrated management system for safety and quality, national and international legislation.</p>
<p>Learning Outcomes:</p> <p>Acquisition necessary knowledge and training about implementation of consistent, efficient and effective system, as well as systematic improvement of performances of modern safety management system in biotechnology.</p>
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Introduction (perception of quality, quality factors, the traditional and modern concept to quality and safety of products), the main contaminants of food, good manufacturing, hygienic and laboratory practice, requirements of standards ISO 9000: 2001 and ISO 22000, theoretical basis of the HACCP system, implementation HACCP system in biotechnology, organization and accreditation of laboratories according ISO 17025 standard.</p> <p><i>Practice</i></p> <p>Practical knowledge of standards ISO 9000, ISO 22000 and ISO 17025, the international code and specific regulations on food quality, preparation of documentation, implementation of HACCP (HACCP team, product description, flow-chart of production, verification of flow diagram, hazard analysis, definition of critical control points and critical limits, definition of the procedure of monitoring, corrective action, verification system, documentation); preparation of seminar paper.</p>
<p>Required Reading:</p> <ol style="list-style-type: none"> 1. V. Ravishankar Rai, J.A. Bai (2018): Trends in Food Safety and Protection, CRC Press, Boca Raton. 2. Lightfoot N.F., Maier E.A.: Microbiological Analyses of Food and Water, Guidelines for Quality Assurance, 2012, Elsevier, The Netherlands. 3. Luning, P. A.: Food Quality management, Wageningen: Wageningen Pers, 2002. 4. Grujić, R., Radovanović, R. Kvalitet i analiza namirnica, Knjiga 2, Banja Luka, 2007. 5. Grujić, R., Sanchius, V., Radovanović, R. HACCP teorija i praksa, Banja Luka 2003.

6. Preporučeni međunarodni kodeks sa osnovnim principima higijene hrane, CAC/RCP 1-1969, Rev. 4, 2003.

7. Radovanović, R., Rajković, A.: Upravljanje bezbednošću u procesima proizvodnje hrane, Beograd, 2009

8. Radovanović, R., Đekić, I.: Upravljanje kvalitetom u procesima proizvodnje hrane, Beograd, 2011.

Weekly Contact Hours:

Lectures: 3

Practical work: 3

Teaching Methods:

Interactive lectures using video presentations, exercises - independent or in smaller groups, consultations.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	
Practical work	15	oral exam	30
Preliminary exam(s)	40	
Seminar(s)	10		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.