

FORM: Syllabus
Course description

General information		
Course Holder	Emilija Friganović, Senior Lecturer	
Course title	Food Quality Assurance	
Study programme	Undergraduate Professional Study of Food Technology	
Course status	Mandatory	
Year	2. (IV semester)	
Evaluation in ECTS credits and forms of class conducting	ECTS coefficient of student workload	4,0
	Number of classes (L+P+S)	45 (30+15+0)

1. COURSE DESCRIPTION		
<i>1.1. Course objectives</i>		
The objective of this course is to prepare students for work on quality control and quality assurance of raw materials and final products in the food industry, on quality management systems, on food safety management systems and on application of good laboratory practice in analytical laboratories.		
<i>1.2. Terms for enrollment</i>		
None		
<i>1.3. Expected learning outcomes related to the course</i>		
After passing the exam, students will be able to: <ul style="list-style-type: none"> - explain the basic concepts related to food quality and safety - use the technical regulations and standards regarding food quality and safety - explain the principles of quality management systems - apply statistical methods in solving quality related problems - compare the basic principles of good laboratory practice with the requirements of ISO/IEC 17025 standard - apply the principles of GMP and GHP - develop a HACCP study - carry out basic analysis of raw materials and products - to interpret analytical reports of different raw materials and products 		
<i>1.4. Course content</i>		
1. Introduction. Quality Assurance History. 2. International food trade; EU and Croatian food safety and quality Legislation 3. Quality management 4. Quality assurance in the food industry 5. Hazard Analysis and Critical Control Points (HACCP) 6. Laboratory Performance Assessment		
<i>1.5. Forms of class conducting</i>	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> practice <input type="checkbox"/> e-learning <input checked="" type="checkbox"/> field learning	<input type="checkbox"/> independent work <input type="checkbox"/> multimedia and the network <input checked="" type="checkbox"/> laboratory <input type="checkbox"/> mentor work <input type="checkbox"/> other _____
<i>1.6. Comments</i>	-	

1.7. Student obligations															
Students are obligated:															
<ul style="list-style-type: none"> - to attend 70 % of lectures and practice and actively participate in classes - to present and defend 2 seminar papers, - to pass a final exam consisting of a written and oral exam (passing grade of two colloquia is recognized as a grade on the final written exam). 															
1.8. Student evaluation method ¹															
Attendance	1,00	Class activity	0,50	Seminar paper	1,30	Experimental work									
Written exam	0,05	Oral exam	0,05	Essay		Research									
Project		Preparing for continuous assessment	1,10	Report		Practical work									
Portfolio															
1.9. Evaluation of the students' work during classes and in the final exam															
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Attendance and class activity</td> <td style="width: 50%;">4,00 % of a grade</td> </tr> <tr> <td>Seminar paper (2)</td> <td>20,00 % of a grade</td> </tr> <tr> <td>Colloquia/Final written exam</td> <td>36,00 % of a grade</td> </tr> <tr> <td>Final oral exam</td> <td>40,00 % of a grade</td> </tr> </table>								Attendance and class activity	4,00 % of a grade	Seminar paper (2)	20,00 % of a grade	Colloquia/Final written exam	36,00 % of a grade	Final oral exam	40,00 % of a grade
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Seminar paper (2)	20,00 % of a grade														
Colloquia/Final written exam	36,00 % of a grade														
Final oral exam	40,00 % of a grade														
1.10. Compulsory reading (updated)															
<ul style="list-style-type: none"> - Friganović, E., Čalić, S. (2011): Osiguranje kvalitete hrane, interna skripta za predmet "Osiguranje kvalitete hrane" na preddiplomskom stručnom studiju Prehrambena tehnologija Veleučilišta "Marko Marulić" u Kninu. - Friganović, E. (2018): Zbirka zadataka za predmet Osiguranje kvalitete hrane, nastavni materijal na preddiplomskom stručnom studiju Prehrambena tehnologija Veleučilišta "Marko Marulić" u Kninu. - Marinculić, A., Habrun, B., Barbić, Lj. Beck, R. (2009): Biološke opasnosti u hrani. HAH, Osijek. - Vasić-Rački, Đ., Galić, K., Delaš, F., Klapeč, T., Kipčić, D., Katalenić, M., Dimitrov, N., Šarkanj, B. (2010): Kemijske i fizikalne opasnosti u hrani. HAH, Osijek. 															
1.11. Additional reading (updated)															
<ul style="list-style-type: none"> - S. E. Mortimer, C. A. Wallace and Christos A. Cassianos, HACCP, Blackwell Science, Oxford, 2001. - P. A. Luning, W. J. Marcelis, W. M. F. Jongen. Food quality management a techno-managerial approach, Wageningen Pers, Wageningen, Netherlands, 2002. - F. M. Garfield, Quality Assurance for Analytical Laboratories, AOAC International, Gaithersburg, Md., 2000. - J. M. Kelly, Upravljanje ukupnom kvalitetom (Total Quality Management) Potecon, Zagreb, 1997. - H. Skoko, Upravljanje kvalitetom, Sinergija, Zagreb, 2000. - M. J. Juran, Planiranje i analiza kvalitete: od razvoja proizvoda do upotrebe 3. izd., Mate, Zagreb, 1999. - Recommended International Code of Practice, General Principles of Food Hygiene, CAC/RCP 1-1969, Rev. 4 (2003). - Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for its Application, Annex to CAC/RCP 1-1969, Rev. 4 (2003). - HRN EN ISO 22000:(n. izd.*) - Sustavi upravljanja sigurnošću hrane - Zahtjevi za svaku organizaciju u lancu hrane - HRN EN ISO 9000: (n. izd.*) - Sustavi upravljanja kvalitetom – Temeljna načela i terminološki rječnik - HRN EN ISO 9001: (n. izd.*) - Sustavi upravljanja kvalitetom – Zahtjevi - HRN EN ISO 9004:(n. izd.*) - Upravljanje u svrhu trajne uspješnosti organizacije – Pristup upravljanju kvalitetom - HRN EN ISO/IEC 17025:(n. izd.*)- Opći zahtjevi za osposobljenost ispitnih i umjernih laboratorija - WTO/SPS - Sporazum o primjeni sanitarnih i fitosanitarnih mjera - WTO/TBT - Sporazum o tehničkim zaprekama u trgovini - www.brc.org.uk - www.codexalimentarius.net - www.efsa.europa.eu - www.fao.org - www.food-care.info 															

¹ IMPORTANT: Each Student Evaluation Method should be followed by a corresponding share in the ECTS credits for each activity so that the total number of ECTS points corresponds to the credit score of the subject. You can use blank fields for additional activities.

- www.globalgap.org
- www.hah.hr
- www.iaf.nu
- www.ilac.org
- www.ippc.int
- www.iso.org
- www.nn.hr (zakonski i podzakonski akti koji se odnose na hranu)
- www.oie.int
- www.sqfi.com
- www.who.int
- www.wto.org

* n. izd. = najnovije izdanje (*latest release*)

1.12. Number of copies of the compulsory reading units compared to the number of students currently attending the course

<i>Title</i>	<i>Number of copies</i>	<i>Number of students</i>
- Friganović, E., Čalić, S. (2011): Osiguranje kvalitete hrane, interna skripta za predmet "Osiguranje kvalitete hrane" na preddiplomskom stručnom studiju Prehrambena tehnologija Veleučilišta "Marko Marulić" u Kninu.	Available to students electronically via the Moodle system	10
- Friganović, E. (2018): Zbirka zadataka za predmet Osiguranje kvalitete hrane, nastavni materijal na preddiplomskom stručnom studiju Prehrambena tehnologija Veleučilišta "Marko Marulić" u Kninu.		10
- Marinculić, A., Habrun, B., Barbić, Lj. Beck, R. (2009): Biološke opasnosti u hrani. HAH, Osijek.	https://www.hah.hr/pdf/Prirucnik%20bioloske%20opasnosti.pdf	10
- Vasić-Rački, Đ., Galić, K., Delaš, F., Klapac, T., Kipčić, D., Katalenić, M., Dimitrov, N., Šarkanj, B. (2010): Kemijske i fizikalne opasnosti u hrani. HAH, Osijek.	https://www.hah.hr/pdf/Knjiga_ke_mijske_i_fizikalne_opasnosti.pdf	10

1.13. Quality assurance methods that ensure the acquisition of knowledge, skills and competencies

Testing is conducted regularly during classes, through presentation, colloquia, the written and oral exam. Information on progress and potential problems is provided to students during semester. At the end of the semester, the evaluation of teachers and course by students (student surveys) is carried out. The information obtained regarding student satisfaction is used to improve the quality of teaching performance. Information on the learning outcomes achieved is used to draw self-evaluation of the teacher and, if necessary, to modify and / or amend the course program, the methods of work and the assessment of the students.