

**FORM: Syllabus**  
**Course description**

<b>General information</b>		
Course Holder	Emilija Friganović, Senior Lecturer	
Course title	<b>Food Science</b>	
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)

<b>1. COURSE DESCRIPTION</b>	
<i>1.1. Course objectives</i>	
The aim of the course is to familiarize students with basic concepts related to food complexity, food digestion and nutrient absorption, nutritional value of food, basic principles of proper nutrition, dietetic and anthropometric methods, food quality and safety control, and food labelling.	
<i>1.2. Terms for enrollment</i>	
None	
<i>1.3. Expected learning outcomes related to the course</i>	
<p>After passing the exam, students will be able to:</p> <ul style="list-style-type: none"> <li>- describe food digestion and absorption of nutrients in the human body</li> <li>- explain the role of certain macronutrients and micronutrients in the human organism</li> <li>- specify dietary sources of essential nutrients</li> <li>- explain the principles of proper nutrition</li> <li>- explain basic concepts related to dietetic and anthropometric methods</li> <li>- calculate daily energy consumption of an individual</li> <li>- use the food composition tables in different calculations</li> <li>- compare foods with regard to nutritional value</li> <li>- compose a nutrition declaration of the food product</li> <li>- use different standards for recommended nutrients and energy intake</li> <li>- assess the quality of food / nutrition using indices</li> <li>- to create diet plan for different population groups according to diet pyramids</li> <li>- compare methods of basic microbiological, chemical, physical and organoleptic analyses of food</li> <li>- to describe the toxicants and sources of toxic substances in food</li> </ul>	
<i>1.4. Course content</i>	
<ol style="list-style-type: none"> <li>1. Introduction to Food Science</li> <li>2. Human relationship to food</li> <li>3. The complexity of the food product</li> <li>4. Nutrition and Health</li> <li>5. Dietary needs</li> <li>6. Nutritional value of a food product</li> <li>7. Food Toxicology</li> <li>8. Food additives</li> <li>9. Food analyses</li> <li>10. Food quality and safety control</li> <li>11. Sensory analyses</li> <li>12. Product Safety and Legislation</li> </ol>	

1.5. <i>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 _____					
1.6. <i>Comments</i>	-						
1.7. <i>Student obligations</i>							
Students are obligated: - to attend 70 % of lectures and practice and actively participate in classes - to present and defend 1 seminar paper, - 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. <i>Student evaluation method</i> <sup>1</sup>							
Attendance	1,00	Class activity	0,50	Seminar paper	0,80	Experimental work	
Written exam	0,05	Oral exam	0,05	Essay		Research	
Project		Preparing for continuous assessment	1,60	Report		Practical work	
Portfolio							
1.9. <i>Evaluation of the students' work during classes and in the final exam</i>							
Attendance and class activity		4,00 % of a grade					
Seminar paper (1)		10,00 % of a grade					
Colloquia/Final written exam		36,00 % of a grade					
Final oral exam		50,00 % of a grade					
1.10. <i>Compulsory reading (updated)</i>							
<ul style="list-style-type: none"> <li>- Šimundić, B., Jaković, V. i Tadejević, V.: Poznavanje robe: živežne namirnice s osnovama tehnologije i prehrane, Tiskara rijeka, 1994.</li> <li>- Živković, R., Dijetetika, Medicinska naklada, Zagreb, 2002.</li> <li>- Mazza, G. (1998): Functional foods: Biochemical and processing aspects, Technomic Pub. Co., Lancaster, Pennsylvania.</li> <li>- Štimac, D., Krznarić, Ž., Vranešić Bender, D., Obrovac Glišić, M. (2014): Dijetoterapija i klinička prehrana, Medicinska naklada, Zagreb.</li> <li>- Mandić, M. L., Perl, A. (2006): Osnove senzorske procjene hrane, Prehrambeno-tehnološki fakultet u Osijeku, Osijek.</li> <li>- Senta, A., Pucarín-Cvetković, J. Donko Jelinić, J. (2004): Kvantitativni modeli namirnica i obroka, Medicinska naklada, Zagreb.</li> <li>- Guyton, A. C. (ur. hrvatskog izdanja Andreis, A., Andreis, I.) (1995): Fiziologija čovjeka i mehanizmi bolesti, Medicinska naklada, Zagreb.</li> <li>- Marinculić, A., Habrun, B., Barbić, Lj. Beck, R. (2009): Biološke opasnosti u hrani. HAH, Osijek.</li> <li>- 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.</li> </ul>							
1.11. <i>Additional reading (updated)</i>							
- M. E. Sjills, J.A. Olson, M. Shike, <i>Modern nutrition in health and disease</i> , Vol. 1. i Vol. 2., Williams&Wilkins, Baltimore, 1994.							
1.12. <i>Number of copies of the compulsory reading units compared to the number of students currently attending the course</i>							

<sup>1</sup> 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.

<i>Title</i>	<i>Number of copies</i>	<i>Number of students</i>
- Šimundić, B., Jaković, V. i Tadejević, V.: Poznavanje robe: živežne namirnice s osnovama tehnologije i prehrane, Tiskara rijeka, 1994.	1	10
- Živković, R. , Dijetetika, Medicinska naklada, Zagreb, 2002.	1	10
- Mazza, G. (1998): Functional foods: Biochemical and processing aspects, Technomic Pub. Co., Lancaster, Pennsylvania.	1	10
- Štimac, D., Krznarić, Ž., Vranešić Bender, D., Obrovac Glišić, M. (2014): Dijetoterapija i klinička prehrana, Medicinska naklada, Zagreb.	1	10
- Mandić, M. L., Perl, A. (2006): Osnove senzorske procjene hrane, Prehrambeno-tehnološki fakultet u Osijeku, Osijek.	1	10
- Senta, A., Pucarín-Cvetković, J. Donko Jelinić, J. (2004): Kvantitativni modeli namirnica i obroka, Medicinska naklada, Zagreb.	1	10
- Guyton, A. C. (ur. hrvatskog izdanja Andreis, A., Andreis, I.) (1995): Fiziologija čovjeka i mehanizmi bolesti, Medicinska naklada, Zagreb.	1	10
- Marinculić, A., Habrun, B., Barbić, Lj. Beck, R. (2009): Biološke opasnosti u hrani. HAH, Osijek.	<a href="https://www.hah.hr/pdf/Prirucnik%20bioloske%20opasnosti.pdf">https://www.hah.hr/pdf/Prirucnik%20bioloske%20opasnosti.pdf</a>	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.	<a href="https://www.hah.hr/pdf/Knjiga_ke_mijske_i_fizikalne_opasnosti.pdf">https://www.hah.hr/pdf/Knjiga_ke_mijske_i_fizikalne_opasnosti.pdf</a>	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.