

## COURSE OUTLINE

### 1. GENERAL

<b>SCHOOL</b>	AGRICULTURAL SCIENCES		
<b>ACADEMIC UNIT</b>	FOOD SCIENCE AND TECHNOLOGY		
<b>LEVEL OF STUDIES</b>	UNDERGRADUATE		
<b>COURSE CODE</b>	<b>FST_403</b>	<b>SEMESTER</b>	<b>4<sup>th</sup></b>
<b>COURSE TITLE</b>	FOOD PROCESSING AND PRESERVATION TECHNOLOGIES		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>
Lectures and laboratory work		3 (lect.) 2 (lab.)	5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).			
<b>COURSE TYPE</b> <i>general background, special background, specialised general knowledge, skills development</i>	Compulsory pecialised general knowledge		
<b>PREREQUISITE COURSES:</b>	Typically, there are not prerequisite course.		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	Greek / English		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	Yes		
<b>COURSE WEBSITE (URL)</b>	<a href="https://eclass.upatras.gr/">https://eclass.upatras.gr/</a>		

### 2. LEARNING OUTCOMES

#### Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

At the end of this course every student will obtain:

- i) Knowledge relevant to the new trends in food production and food preservation techniques at industry or household scale.
- ii) Knowledge relevant to the nutritional value of preserved food (composition, chemical additives, possibility of contamination with toxic substances.
- iii) Knowledge about the effect of several food treatments on their constituents.

Furthermore students will obtain the necessary knowledge that will help them to understand the content of next courses as “Food Safety”, Marketing of Food, Food Safety Management Systems.

#### General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
	Respect for the natural environment

Decision-making Working independently Team work Working in an international environment Working in an interdisciplinary environment Production of new research ideas	Showing social, professional and ethical responsibility and sensitivity to gender issues Criticism and self-criticism Production of free, creative and inductive thinking ..... Others... .....
Decision-making Working independently Team work Project planning and management Working in an interdisciplinary environment	

### 3. SYLLABUS

Food Industries Introduction. Food preservation techniques: i) Heat treatment (pasteurization - sterilization) ii) use of low temperature and cold preservation iii) drying and dehydration, iv) canning, v) fermentation vi) Irradiation, vii) Use of preservatives viii) Food packaging-packaging materials-nutrition labeling, ix) novel packaging technologies, x) **Transfer of chemicals** from **packaging** materials to food. Food hygiene.

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b> <i>Face-to-face, Distance learning, etc.</i>	Lectures and Laboratory practice face to face.	
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. Notes with the content of the course are uploaded on the internet, where from the students can freely download them using a password which is provided to them at the beginning of the studies.	
<b>TEACHING METHODS</b> <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.  The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<b>Activity</b>	<b>Semester workload</b>
	Lectures (3 conduct hours per week x 13 weeks)	39
	Laboratory work (2 conduct hours per week x 10 weeks)	20
	Laboratory reports (2 hours per week x 8 reports)	16
	Final examination (3 conduct hours)	3
	Hours for private study of the student	47
	<b>Total number of hours for the Course (25 hours of work-load per ECTS credit)</b>	<b>125 hours (total student work-load)</b>
<b>STUDENT PERFORMANCE EVALUATION</b> <i>Description of the evaluation procedure</i>	1. Written examination after the end of the semester. The mark	

<p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>constitutes the 75% of the final grade (<math>G_{75\%}</math>). Minimum passing grade: 5.</p> <p>2. Reports following completion of each laboratory experiment. The mean mark constitutes the other 25% of the final grade (<math>G_{25\%}</math>). Minimum passing grade: 5.</p> <p>The final grade for the course is calculated by the final grade in the Lab (25%) and the grade of the final written examination (75%). The student must have secured a minimum grade of 5 in both Lab and the final written examination.</p>
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## 5. ATTACHED BIBLIOGRAPHY

<p><i>- Suggested bibliography:</i></p> <ol style="list-style-type: none"> <li>1. ΤΕΧΝΟΛΟΓΙΑ ΤΡΟΦΙΜΩΝ ΖΑΜΠΕΤΑΚΗΣ ΙΩΑΝΝΗΣ, ΝΑΣΟΠΟΥΛΟΥ ΚΩΝΣΤΑΝΤΙΝΑ, ΝΙΚΟΛΑΟΥ ΣΠΥΡΟΣ ΕΚΔΟΣΕΙΣ ΣΤΑΜΟΥΛΗ Α.Ε.</li> <li>2. ΑΡΧΕΣ ΤΕΧΝΟΛΟΓΙΑΣ ΤΡΟΦΙΜΩΝ ΚΙΟΣΕΟΓΛΟΥ Β., ΜΠΛΕΚΑΣ Γ. ΕΚΔΟΤΗΣ: ΆΓΙΣ-ΣΑΒΒΑΣ ΓΑΡΤΑΓΑΝΗΣ</li> </ol>
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