FACULTY/SCHOOL	FACULTY OF ENVIRONMENT		
DEPARTMENT	FOOD SCIENCE AND TECHNOLOGY		
LEVEL OF STUDY	UNDERGRADUATE		
COURCE UNIT CODE	**FST104**	**SEMESTER**	**1**
COURCE TITLE	**Introduction to Food Science and Technology**		

INDEPENDENT TEACHING ACTIVITIES *in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHNG HOURS**	**CREDITS (ECTS)**
Lectures	2	3
Tutoring	---	
Laboratory		
Total	**2**	**3**
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4		

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Background knowledge General Knowledge
PREREQUISITE COURSES:	
LANGUAGE OF INSTRUCTION:	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT:	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes (in Greek)
COURSE WEBSITE (URL)	

LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail.

It is necessary to consult:

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*

- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

After completing this course, students will have:

- Familiarized themselves with and comprehended concepts related to Food Science and Technology
- Learned the general principles that govern Food Science and Technology
- Comprehended the origin, composition, and nutrients of food and the nutritional value of distinct categories of food
- Learned the basic principles of food processing and preservation
- Familiarized themselves with packaging form, the role of additives, comprehended the basic rules of hygiene and safety in production plants, and the rules of transport and storage
- Exposed themselves to issues related to global food demand, available food supply, and contemporary problems of food sufficiency and quality

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work
Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking
……
(Other…….citizenship, spiritual freedom, social awareness, altruism etc.)
…….

- Researching, analyzing, and synthesizing data and information with the use of suitable technologies
- Working autonomously
- Promoting free, creative, and deductive reasoning

COURSE CONTENT

1. Definitions and general concepts in Food Science and Technology. The food industry.
2. Composition, nutrients and nutritional value of food.
3. Carbohydrates (stereochemistry, chemical and physical properties, structural and storage polysaccharides).
4. Proteins (structure, role, physical and chemical properties).
5. Fats and oils (chemical structure, chemical and physical properties, fatty acids in food).
6. Water (water in food, chemical structure, chemical and physical properties).
7. Minerals (macronutrients, micronutrients and their role).
8. Vitamins and food additives (antioxidants, preservatives, colorings).
9. Contemporary challenges of the agri-food and food sector.
10. Origin and categories of food.
11. Hygiene and food safety, spoilage, sources of contamination (effects of microorganisms on food, desirable and undesirable changes, toxins).

12. Principles of food processing, preservation and packaging (principles of heating, cooling, freezing, condensation/drying).
13. Qualitative and sensory evaluation of food.

TEACHING METHODS--ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc.*	Face-to-face, in-class lecturing
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Power point presentation, Whiteboard writing, Communication with students through e-class and e-mails
OURSE DESIGN *Description of teaching techniques, practices and methods:* *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc.* *The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	

Activity/Method	***Semester workload***
Lectures	78
Total contact hours and training	***78***

STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Final written examination that includes: -multiple choice questions -fill-in the blanks questions -short answer questions

SUGGESTED READING:

- Abuhav, I. (2016). A Complete Guide to Quality Management Systems. Taylors and Francis, Portland, OR.
- Campbell-Platt, G. (2017) Food Science and Technology. 2nd ed. Willey, Hoboken, NJ.
- Bélanger, J. and D. Pilling. (2019) The State of the World's Biodiversity for Food and Agriculture. FAO, Rome.

Performance Statistics of the last 2years			
Grade (descending order)	**absolute frequency**	**relative frequency %**	**sum of success rates per class**
INTRODUCTION TO FOOD SCIENCE AND TECHNOLOGY			
10	3	1%	1%
9	2	1%	2%
8	29	14%	17%
7	54	26%	43%
6	116	57%	100%
	204	100%	