

## New Trends in Food Science and Nutrition (Seminar)

### COURSE OUTLINE

#### GENERAL

<b>SCHOOL</b>	AGRICULTURAL SCIENCES		
<b>DEPARTMENT</b>	FOOD SCIENCE AND NUTRITION		
<b>EDUCATION LEVEL</b>	<i>Undergraduate</i>		
<b>COURSE CODE</b>	<b>ME917</b>	<b>SEMESTER</b>	9'
<b>COURSE TITLE</b>	New Trends in Food Science and Nutrition (Seminar) RESPONSIBLE: I. Giovanoudis		
<b>SELF-ENDED TEACHING ACTIVITIES</b> <i>in case the credits are awarded in separate parts of the course e.g. Lectures, Laboratory Exercises, etc. If the credits are awarded uniquely for the entire course, enter the weekly teaching hours and total credits</i>		<b>WEEKLY TEACHING HOURS</b>	<b>CREDIT UNITS (ECTS)</b>
<b>Lectures</b>		2	4
<b>Laboratory / Application Exercises</b>		2	
<b>ΤΥΠΟΣ ΜΑΘΗΜΑΤΟΣ</b>	Scientific Area of Food and Nutrition, by Selection		
<b>ΠΡΟΑΠΑΙΤΟΥΜΕΝΑ ΜΑΘΗΜΑΤΑ:</b>	-		
<b>ΓΛΩΣΣΑ ΔΙΔΑΣΚΑΛΙΑΣ και ΕΞΕΤΑΣΕΩΝ:</b>	Greek		
<b>ΤΟ ΜΑΘΗΜΑ ΠΡΟΣΦΕΡΕΤΑΙ ΣΕ ΦΟΙΤΗΤΕΣ ERASMUS</b>	No		
<b>ΗΛΕΚΤΡΟΝΙΚΗ ΣΕΛΙΔΑ ΜΑΘΗΜΑΤΟΣ (URL)</b>			

#### LEARNING OUTCOMES

##### Learning Outcomes

The purpose of the course is to familiarize students with new trends in food science and nutrition. Training is provided in introductory concepts (new product, new types, novel and functional foods, innovation), trends in the food industry and nutrition science (e.g. modern nutritional views), new product design and decision-making and market research. The course aims to enable the student to understand the concepts and principles of scientific and professional ethics and to apply the particular ethical dimensions involved in the production and promotion of food while always respecting the nutritional needs of consumers.

The course is implemented in seminar cycles in which the students undertake a project in the fields of: (a) Innovative food processing and distribution technologies, (b) Alternative protein sources, (c) Product development in the context of personalized nutrition

##### General Skills

- Data search, analysis and synthesis
- Promotion of critical thinking
- Promotion of teamwork

#### COURSE CONTENT

1st Week  
Introduction to the course  
1st cycle of seminars  
2nd Week  
Design and exploitation of innovative technologies in food production, penetration into the food industry  
3rd Week  
Environmental footprint of the food production process  
4th Week  
Food supply chain management systems and Utilization of IT technologies  
5th Week

Strategies to reduce food waste  
 2nd cycle of seminars  
 6th Week  
 New sources of raw materials for the food industry  
 7th Week  
 Protein recovery from insects  
 8th Week  
 The contribution of food science to the food challenge and ensuring food sufficiency  
 3rd cycle of seminars  
 9th Week  
 Bioactive ingredients, control and enhance their bioavailability for the production of innovative food nutraceuticals  
 10th Week  
 Development of new personalized nutrition products  
 11th Week  
 Health Claims: Legislation and Consumer Misleading and Deception Issues  
 12th Week  
 Presentation of works of student groups I  
 13th Week  
 Presentation of work of student groups II

#### TEACHING and LEARNING METHODS - EVALUATION

<b>TEACHING METHOD</b>	Face-to-face lectures in a classroom	
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>		
<b>TEACHING ORGANISATION</b>	<b>Activity</b>	<b>Semester's Workload</b>
	Lectures	26
	Study and research on teamwork	40
	Preparation for the presentation of the group work	34
	<b>Total (25 workload hours per Credit unit)</b>	<b>100</b>
<b>STUDENT EVALUATION</b>	<b>Written assignment: 50%</b> <b>Presentation of work: 50%</b>	

#### RECOMMENDED BIBLIOGRAPHY

- Related scientific journals:
- Journal of Food Engineering, Official scientific journal of the International Society of Food Engineering
  - Journal of Food Process Engineering
  - Food Engineering Reviews