

SCHOOL	FACULTY OF ENVIRONMENT		
ACADEMIC UNIT	FOOD SCIENCE AND TECHNOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	FST802	SEMESTER	8
COURSE TITLE	FOOD PRODUCT DEVELOPMENT		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercise, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	CREDITS	
Lectures	2		
Laboratory classes	2		
Total	4	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>General background, special background, specialised general knowledge, skills development</i>	Specialised general knowledge		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (Greek)		
COURSE WEBSITE (URL)			

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

The **aim of the course** is to introduce the current nutritional concepts that govern the design of new products and the trends in the food industry for the development of new products and also to gain knowledge of the relevant processes and decision making strategy of the industry by familiarizing students with basic principles and concepts related to research and development of new foods by selecting case studies of specialized products.

Upon successful completion of the course the student will be able to:

- Distinguish current nutritional trends that dictate new product design, food industry trends for new product development and their applications.
- Describe the basic principles related to research and development of new foods

- Apply strategies and processes for the development of new foods to meet the requirements of industry and consumers.
- Predict and modify the life cycle of a product

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
 Adapting to new situations
 Decision-making
 Working independently
 Team work
 Working in an international environment
 Working in an interdisciplinary environment
 Production of new research ideas

Project planning and management
 Respect for difference and multiculturalism
 Respect for the natural environment
 Showing social, professional and ethical responsibility and sensitivity to gender issues
 Criticism and self-criticism
 Production of free, creative and inductive thinking

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 Others...

- (1) Adapting to new situations
- (2) Decision-making
- (3) Working independently
- (4) Team work
- (5) Criticism and self-criticism
- (6) Production of free, creative and inductive thinking
- (7) Search for, analysis and synthesis of data and information, with the use of the necessary technology

SYLLABUS

Theoretical part

Theoretical views and applications for the development of new human food products. An overview of the principles and methods used in decision making for new product development, as well as for the design, manufacture, quality evaluation, standardization, marketing and advertising, market research and patenting of the new product. Legislative restrictions on ingredients, processing, packaging and labeling.

Laboratory part

SECTION 1st

- Necessity of New Food Development - Basic principles and concepts related to research and development of new products.
- Contemporary Nutritional Views.
- Consumer Requests
- Development strategies - new product development processes.
- Creating ideas for new products
- Factors influencing the development of new products in the food industry
- Environmental Constraints - Legislation
- Product Life Cycle - Life cycle management and forecasting

SECTION 2nd

- Modern food packaging technologies.

- Nutrition labeling - nutrition claims, legislation.
- Creating a food label, legislation.
- Special Markings

SECTION 3rd

- Students create innovative products, which were decided during the brainstorming process. • Label design of the product they created.
- Calculation of nutritional value of the product Tasting and rating by the students of the final product.
- Discussion of Results.

SECTION 4th

- Innovative foods
- Functional foods
- Organic food
- Genetically Modified Foods

TEACHING and LEARNING METHODS - EVALUATION

<p>DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	Face-to-face	
<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	Use of information technology on data collection and information, in teaching and communication. Communication with students via web, e-mail, e-class and online folder sharing options etc.	
<p>TEACHING METHODS <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></p>	<p>Activity</p>	<p>Semester workload</p>
	Lectures	78
	Laboratory classes	26
	Total contact hours and training	104
<p>STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure 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 Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Theoretical part : Written examination on graded multiple choice difficulty plus a written project Language Greek</p> <p>Laboratory part: Laboratory exercises:20% Final written evaluation on Lab exer: 80%</p>	

ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

• *New Ingredients in food processing*, edited by G. Linden And D. Dorient, (Woodhead Publishing Ltd), 1999, CRC Press (USA).

- *Food Processing Handbook*, edited by J.G. Brennan, 2006, Wiley-VCH (Germany).

- *Developing New Food Products for a Changing Marketplace*. Edited by AL Brody and JB Lord. CRC Press. 2000.

- Έρευνα & Ανάπτυξη νέων προϊόντων & Επιχειρηματικών Σχεδίων Έκδοση: 1/2017

Performance Statistics of the last 2years			
Grade (descending order)	absolute frequency	relative frequency %	sum of success rates per class
DEVELOPMENT OF NEW FOOD PRODUCTS			
10	3	3%	3%
9	16	15%	17%
8	31	28%	45%
7	35	32%	77%
6	25	23%	100%
	110	100%	