

Course Outline: “6107 - Functional Foods”

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	6107	SEMESTER	6th
COURSE TITLE	Functional Foods		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	CREDITS
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			
Lectures		2	
<i>Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4</i>		2	3
COURSE TYPE	Scientific expertise		
<i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>			
PREREQUISITE COURSES	No		
LANGUAGE OF INSTRUCTION	Greek		
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_249/		

2. 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: Συμβουλευτείτε το

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

The course delves into the manifold biological characteristics of functional foods. Firstly, the course aims to help the students comprehend the principles of Redox Biology since the free radical theory applies to the research field of Nutrition and partially describes the biology of functional foods, whose antioxidant properties are of utmost importance. Furthermore, the European legislation concerning the characterization of foods as functional is analyzed through the detailed study of the 1924/2006 regulation. To that end, the basic principles for the actions of the European Food and Safety Authority (EFSA), whose role on the characterization of specific foods or food components as functional is decisive, are also thoroughly investigated. Finally, via the presentation of the fundamental knowledge regarding the Biotechnology and Genetic Engineering technologies the course will inform the students about the genetically modified organisms and foods that possess notable biological activity and, concomitantly, raise worth mentioning bioethics issues. Moreover, the students will also obtain the necessary knowledge and skills to continue their studies in postgraduate and PhD levels in relevant fields. They will also be able to seek research studies from the international literature by using the most established search engines (e.g., Pubmed).

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

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,

interdisciplinary environment Introduction of innovative research (altruism etc.)

- Individual/Independent work
- Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Research in the fields of Biology and Nutrition
- Approaching the field of Nutrition through the theory of free radicals
- Antioxidants and Nutrition
- Redox biomarkers in Nutrition
- Functional foods - Concepts and principles
- The European regulation 1924/2006
- The European Food Safety Authority (EFSA)
- Scientific assessment of functional food folders by EFSA
- Genetically modified organisms
- Genetically modified foods
- Bioactivity - Bioavailability of foods
- Probiotics and prebiotics
- Minerals and trace minerals
- Biophenols
- Sulphur compounds
- Examples of functional foods found in the market

4. TEACHING METHODS - ASSESSMENT

<p>MODES OF DELIVERY <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc..</i></p>	Face to face	
<p>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in teaching, Laboratory Education, Communication with students</i></p>	<p>1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).</p>	
<p>COURSE DESIGN <i>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.</i></p>	<p>Activity/Method</p>	<p>Semester workload</p>
	Lectures	2 × 13 = 26
	Literature analysis	14
	Preparation for the exams	35
<p>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS <i>Detailed description of the evaluation procedures:</i> <i>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,</i></p>	<p>The assessment language is Greek. The performance of the students is assessed through written exams (100%).</p>	
Total		75

<p><i>laboratory work, other.....etc.</i> <i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.</i></p>	
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5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Functional Foods: The Connection Between Nutrition, Health, and Food Science. Edited by Leah Coles. Apple Academic Press, 1st Edition, 2013.
- Handbook of Nutraceuticals and Functional Foods (Modern Nutrition). Edited by Robert E.C. Wildman and Richard S. Bruno (Editor). NRC Press, 3rd Edition, 2019.

-Scientific Journals:

- Journal of Functional Foods
- Journal of Agricultural and Food Chemistry
- European Journal of Nutrition
- Foods
- Nutrients
- Food and Chemical Toxicology
- American Journal of Clinical Nutrition
- Applied Physiology Nutrition and Metabolism
- Journal of Nutrition
- British Journal Of Nutrition