

COURSE OUTLINE

1. GENERAL

SCHOOL	SCHOOL OF FOOD & NUTRITIONAL SCIENCES		
ACADEMIC UNIT	FOOD SCIENCE AND HUMAN NUTRITION		
LEVEL OF STUDIES	INTEGRATED MASTER		
COURSE CODE	3310	SEMESTER	1st
COURSE TITLE	INTRODUCTION TO FOOD SCIENCE AND HUMAN NUTRITION		
INDEPENDENT TEACHING ACTIVITIES	WEEKLY TEACHING HOURS	CREDITS	
<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>			
Lectures (Theory)	3L	3	
<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>	<i>General background</i>		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://mediasrv.aua.gr/eclass/courses/ETDA125/		
INSTRUCTORS Lectures & Laboratory Exercises	LECTURES Theofilos Massouras, Professor Maria Kapsokefalou, Professor		

2. LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>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.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i> 																			
<p>The course is an introductory class to Food Science and Human Nutrition.</p> <p>The course aims to introduce:</p> <ul style="list-style-type: none"> • Basic principles on the science of foods and on the processes of preparation and storage of foods for human consumption. • Principles involved in main food processing technologies (drying, freezing, canning) technologies. • Properties associated with different commodity areas such as dairy, meats, fruits, vegetables, cereals, grains, etc. • Basic knowledge on the nutritive value of foods, dietary guidelines and on the effect of dietary choices on health and sustainability. <p>At the end of the class, the student will have acquired the following skills:</p> <ul style="list-style-type: none"> • Knowledge and understanding of basic concepts and recent developments in the field of Food science and Human Nutrition. • Ability to understand connections among the various areas of Food Science and Human Nutrition 																			
<p>General Competences</p> <p><i>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?</i></p> <table border="0"> <tr> <td><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td><i>Project planning and management</i></td> </tr> <tr> <td><i>Adapting to new situations</i></td> <td><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td><i>Decision-making</i></td> <td><i>Respect for the natural environment</i></td> </tr> <tr> <td><i>Working independently</i></td> <td><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td><i>Team work</i></td> <td><i>Criticism and self-criticism</i></td> </tr> <tr> <td><i>Working in an international environment</i></td> <td><i>Production of free, creative and inductive thinking</i></td> </tr> <tr> <td><i>Working in an interdisciplinary environment</i></td> <td><i>.....</i></td> </tr> <tr> <td><i>Production of new research ideas</i></td> <td><i>Others...</i></td> </tr> <tr> <td></td> <td><i>.....</i></td> </tr> </table>		<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Team work</i>	<i>Criticism and self-criticism</i>	<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>	<i>Working in an interdisciplinary environment</i>	<i>.....</i>	<i>Production of new research ideas</i>	<i>Others...</i>		<i>.....</i>
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<p>Acquisition, analysis and synthesis of data and information with the use of relevant technologies.</p> <p>Knowledge flexibility and adaption in new scientific environment</p> <p>Independent work</p> <p>Work in interdisciplinary environment</p> <p>Development of new research ideas</p> <p>Respect and consideration on issues of diversity, difference and multiculture</p>																			

Respect to ecosystems
 Social and ethical responsibility and sensitivity on male/female issues
 Critical thinking
 Promotion of free, creative and analytical thinking

3. SYLLABUS

Lectures:

- Introduction in food science and technology.
- The science of food and its relationship to the basic fundamental sciences of biology, physical sciences, and engineering
- Agriculture and food industry: The politics of food from a global perspective, global food needs, available sources of food supply.
- Definition and distinction agricultural industries. Supply and demand in agribusiness.
- General principles of food science and technology with reference to the types of foods and their nutritional value.
- Primary farming production and quality characteristics of fresh products.
- Physico-chemical, nutritional and organoleptic characteristics of food.
- Fundamentals processing and preservation of fresh produce and food production.
- Basic processes used for preservation and food processing.
- Basic processes used for preservation and food processing. principles of processing and storage of food. Flow charts of food production.
- Basic principles and concepts on research and development of new food products that meet the demands of industry and consumers.
- Food legislation. International bodies responsible for food safety and standards of quality.
- Nutrients and non-nutrients, essential nutrients. Food Composition Datasets.
- Nutritional needs. Nutrition and chronic disease.
- Dietary guidelines. Mediterranean Diet. Sustainable Diets.

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face Distance learning												
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Power point and blackboard presentations Asynchronously by means of the platform e-class. also employed for the communication with the students.Distance learning by means of MS Teams platform. Use of special software for nutritional data analysis												
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.</i>	<table border="1"> <thead> <tr> <th style="background-color: #e0e0e0;"><i>Activity</i></th> <th style="background-color: #e0e0e0;"><i>Semester workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>26</td> </tr> <tr> <td>Exercises</td> <td>10</td> </tr> <tr> <td>Educational visits to food industries</td> <td>20</td> </tr> <tr> <td>Autonomous study</td> <td>34</td> </tr> <tr> <td>Total contact hours and training</td> <td>90</td> </tr> </tbody> </table>	<i>Activity</i>	<i>Semester workload</i>	Lectures	26	Exercises	10	Educational visits to food industries	20	Autonomous study	34	Total contact hours and training	90
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<p>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</p>	
<p align="center">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <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>Language examination: Greek (English for ERASMUS Students)</p> <p>Evaluation of the student :</p> <p>A) Each student will prepare a scientific work in one of the subjects of the course and at the end of the semester develops in PowerPoint presentation, under the supervision of the responsible teacher. The presentation of work gives the student 100 % of the final grade of course . The students who do not have this preparation work in the time they get 80 % of the grade.</p> <p>B) I. Written exam that includes Multiple choice questions Short answer questions Critical evaluation of concepts</p> <p>II. Coursework and homework on nutritional evaluation with the use of software</p>

5. ATTACHED BIBLIOGRAPHY

BOOKS

GIBNEY M., VORSTER H., KOK F. INTRODUCTION TO HUMAN NUTRITION, PARISIANOS PUBLICATIONS SA
SFLOMOS K., MASSOURAS TH., VARZAKAS TH. INTRODUCTION OF FOOD SCIENCE & TECHNOLOGY, TSOTRAS PUBLICATIONS SA. ISBN 978-618-5495-59-6

Geoffrey Campbell-Platt, Food Science and Technology, John Wiley & Sons

Wilbur Gould, Fundamentals of food processing and technology ISBN 1 84569 594 1

JOURNALS

Journal of Agricultural and Food Chemistry,

Journal of Food Science and Technology,

Agricultural and Environmental Chemistry,

International Journal of Agricultural and Food Research (IJAFR)

American Journal of Clinical Nutrition,

European Journal of Nutrition,

International Journal of Food Sciences and Nutrition,

Lancet,

Nutrition.