

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 <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>		WEEKLY TEACHING HOURS	CREDITS
Lectures		3	3
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	General background		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	NO		
COURSE WEBSITE (URL)			

2. LEARNING OUTCOMES

<p>Learning outcomes</p> <p>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.</p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> • 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
<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, pasteurization, sterilization, evaporation) technologies. • Properties associated with different commodity areas such as dairy, meats, fruits, vegetables, cereals, grains, etc. • Basic concepts on the effect of dietary choices on health and sustainability. • Sustainable nutrition. Dietary guidelines. Mediterranean diet.

- Basic concepts on the nutritive value of foods
- Nutrition as a driver for innovation.

At the end of the class, the student will have acquired the following skills:

- 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

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?

<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>Teamwork</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>

Acquisition, analysis and synthesis of data and information with the use of relevant technologies.
 Knowledge flexibility and adaption in new scientific environment
 Independent work
 Work in interdisciplinary environment
 Development of new research ideas
 Respect and consideration on issues of diversity, difference and multiculture
 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.
- Basic concepts on healthy dietary choices. Personalised nutrition. Nutrition and chronic disease. Food Insecurity.
- Nutritional value of foods.
- Sustainable food systems. Sustainable Nutrition.
- Dietary guidelines. Mediterranean Diet. Sustainable Diets.
- Nutrition as a driver for innovation. Functional Foods. Reformulation of foods.

4. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face Distance learning, if needed																		
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Asynchronously by means of the platform e-class, also employed for the communication with the students together with the platform e-student. Distance learning by means of MS Teams platform.																		
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> <i>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>	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Activity</th> <th colspan="2" style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">26</td> <td></td> </tr> <tr> <td>Exercises</td> <td style="text-align: center;">10</td> <td></td> </tr> <tr> <td>Autonomous study</td> <td style="text-align: center;">39</td> <td></td> </tr> <tr> <td>Total contact hours and training</td> <td style="text-align: center;">75</td> <td></td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">75</td> <td></td> </tr> </tbody> </table>	Activity	Semester workload		Lectures	26		Exercises	10		Autonomous study	39		Total contact hours and training	75		Course total	75	
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STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <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> <i>Specifically defined evaluation criteria are given, and if and where they are accessible to students.</i>	Language examination: Greek Evaluation of the student : B) I. Written exam that includes Multiple choice questions Short answer questions Critical evaluation of concepts																		

5. ATTACHED BIBLIOGRAPHY

- Suggested 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

- Related academic journals:

American Journal of Clinical Nutrition, *European Journal of Nutrition*, *International Journal of Food Sciences and Nutrition*, *Lancet*, *Nutrition*.

Journal of Agricultural and Food Chemistry,

Journal of Food Science and Technology,

Agricultural and Environmental Chemistry,

International Journal of Agricultural and Food Research (IJAFR)