

## COURSE OUTLINE

### 1. GENERAL

<b>SCHOOL</b>	APPLIED ECONOMIC AND SOCIAL SCIENCES		
<b>ACADEMIC UNIT</b>	AGRIBUSINESS AND SUPPLY CHAIN MANAGEMENT		
<b>LEVEL OF STUDIES</b>	<i>Undergraduate</i>		
<b>COURSE CODE</b>	LOG910	<b>SEMESTER</b>	9
<b>COURSE TITLE</b>	Food packaging – standardization and quality control		
<b>INDEPENDENT TEACHING ACTIVITIES</b>		<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>
	Lectures	5	5
<b>COURSE TYPE</b>	Special Background		
<b>PREREQUISITE COURSES</b>	NO		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>IS THE COURSE OFFERED for ERASMUS STUDENTS?</b>	YES (in English)		
<b>COURSE WEBSITE (URL)</b>	<a href="https://oeclass.aua.gr/eclass/">https://oeclass.aua.gr/eclass/</a>		

### 2. LEARNING OUTCOMES

Learning Outcomes
<p>The aim of the course is:</p> <p>the understanding &amp; learning of scientific and technical concepts concerning packaging food and specifically the operation of packaging, materials, their production, and their applications.</p> <p>The acquired knowledge through the lectures and workshops of the course concerns the information about materials and their properties. The course describes the basic packaging materials and analyzes their physical, thermal, chemical, and other properties related to the preservation of food. The methods of their analysis and the desired limits of properties in food packaging applications are precisely defined.</p> <p>In laboratory exercises, students are asked to recall the information and combine it to select suitable combinations of packaging materials for maximum durability and quality.</p> <p>The understanding of packaging concepts is achieved through problem solving where the interpretation of the problem is required, and the levels and factors are recognized in order to lead the student to conclusions as to the method and technique of approaching the problem.</p> <p><b>Upon successful completion of the course, the student will be able to:</b></p> <ul style="list-style-type: none"> <li>● understand the importance of its quality and benefit and that it constitutes a matter of prevention and not of controls or inspections</li> <li>● understanding the importance of specifications, customer and versatility on the definition of quality, and the relationship of the latter with quality problems</li> <li>● understand the dimensions of quality that contribute to its determination in a product</li> <li>● combine statistics with the concept of quality to solve or prevent quality problems, as</li> </ul>

well as improving it

- understand the application of problem-solving and quality management tools
- understand the need for continuous quality improvement
- understand the concept and methods of organoleptic examination
- familiar with the analysis of the data of the organoleptic examination

#### General Competences

- Search, analyze and synthesize data and information, using the necessary technologies
- Adapting to new situations
- Decision-making
- Independent work
- Teamwork
- Working in an International Environment
- Working in an Interdisciplinary Environment
- Promotion of new Research Ideas
- Respect for the Natural Environment
- Project Planning and Management
- Respect for Diversity and Multiculturalism
- Demonstration of social, professional and ethical responsibility and gender sensitivity
- Criticism and self-criticism
- Promotion of free, creative and inductive thinking

### 3. SYLLABUS

1. Role of packaging. Examples of the use of packaging in various foods.
2. Plastic packaging I Conceptual terms. Types of plastic packaging
3. Plastic packaging II Ways of preparation of plastic packaging. Properties of plastic materials
4. Paper packaging I. Conceptual terms. Paper making
5. Paper packaging II. Paper packaging items and applications
6. Glass packaging. Conceptual terms. Preparation of glass packaging. Glass packaging applications
7. Other types of packaging.
8. Introduction to the principles of food quality control
9. Food quality characteristics - Quality factors
10. Introduction to statistical food quality control
11. Food production process capacity analysis
12. Solving food quality control problems and quality improvement
13. Methods of organoleptic evaluation of foods

A combination of teaching and learning methods will be used aiming at the active participation of students and the practical application of the thematic units under consideration: lectures using audiovisual means, analysis and discussion of case studies on real operational issues, experiential (group) exercises, as well as projection of relevant videos.

In addition, articles in electronic form, audiovisual lecture material, web addresses, useful information, case studies and exercises are posted in eclass for the students' practice.

#### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	Face -to-face, Distance learning																
<b>USE OF INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	<ul style="list-style-type: none"> <li>• Support of the learning process through the University's AUA Open eClass platform (integrated e-Course Management System)</li> <li>• Support of lectures using presentation software</li> <li>• Use of audiovisual material</li> <li>• Use of web applications</li> </ul> <p><b>Communication with students:</b> face to face at office hours, email, eclass platform</p>																
<b>TEACHING METHODS</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><i>Activity</i></th> <th style="text-align: center;"><i>Workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures (direct)</td> <td style="text-align: center;">39</td> </tr> <tr> <td>Laboratories</td> <td style="text-align: center;">26</td> </tr> <tr> <td><i>Writing paper/ papers</i></td> <td style="text-align: center;">20</td> </tr> <tr> <td><i>Independent Study</i></td> <td style="text-align: center;">36</td> </tr> <tr> <td><i>Advisory support</i></td> <td style="text-align: center;">0,5</td> </tr> <tr> <td><i>Exams</i></td> <td style="text-align: center;"><b>2</b></td> </tr> <tr> <td><i>Course Total (Approximately 25 hours of workload per credit unit 125.5)</i></td> <td style="text-align: center;"><b>125,5</b></td> </tr> </tbody> </table>	<i>Activity</i>	<i>Workload</i>	Lectures (direct)	39	Laboratories	26	<i>Writing paper/ papers</i>	20	<i>Independent Study</i>	36	<i>Advisory support</i>	0,5	<i>Exams</i>	<b>2</b>	<i>Course Total (Approximately 25 hours of workload per credit unit 125.5)</i>	<b>125,5</b>
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<b>STUDENT PERFORMANCE EVALUATION</b>	<p>The evaluation process is in the language that the course is taught (Greek or English) and consists of:</p> <ol style="list-style-type: none"> <li>i. Compulsory written final examination at the end of the semester (weighting factor <b>70%</b> at least) which may includes: <ul style="list-style-type: none"> <li>● Multiple choice questionnaires</li> <li>● Open-ended questions</li> <li>● Problem solving</li> <li>● Oral examination</li> </ul> <p><b>Evaluation criteria:</b> correctness, completeness, clarity</p> </li> <li>ii. Optional written exam or essay during the semester (weighting factor 30%) which may includes: <ul style="list-style-type: none"> <li>● Multiple choice questionnaires</li> <li>● Open-ended questions</li> <li>● Problem solving</li> <li>● Essay/report</li> <li>● Oral examination</li> </ul> <p><b>Evaluation criteria:</b> correctness, completeness, clarity</p> </li> </ol> <p><b>Special learning difficulties:</b></p> <p>Students with <b>special learning difficulties</b> in writing and</p>																

reading (as they are certified and characterized by a competent body) are examined based on the procedure provided by the Department.

**Specifically-Defined Criteria:**

The evaluation criteria are made known during the first lesson and are clearly stated on the course website and the AUA Open e-class platform. The answers to the exam questions are posted on the AUA Open e-Class platform after the exam. The students are allowed to see their exam paper after its grading (during the announced office hours) and receive explanations about the grade they received.

## 5. ATTACHED BIBLIOGRAPHY

***Suggested Bibliography in Greek Language:***

- Δώρα Γεωργακή, Κατερίνα Κουρούπη, Σταύρος Πολίτης, Δημήτριος Ρέκκας. 2010. Διαχείριση
- Ολικής Ποιότητας. Εκδόσεις Ι. ΣΙΔΕΡΗΣ.
- Παπαδάκης Σ. 2010. Συσκευασία Τροφίμων Τζιόλας ISBN: 9789604182268
- Μπλούκας Ι. 2004. Συσκευασία Τροφίμων Σταμούλη ISBN:9603515086
- Gordon L. Robertson. 2012. Food Packaging: Principles and Practice. CRC Press (3rd ed.). ISBN 9781439862414
- Α. Καναβούρας. Προστατευτική Συσκευασία. Εκδ. Παπαζήση. ISBN: 978-960-02-2315-6.

***Suggested Bibliography in English Language:***

- Amitava Mitra. 2008. Fundamentals of Quality Control and Improvement, 3rd edition. WILEY Publications.
- Herbert Stone and Joel L. Sidel. 2004. Sensory Evaluation Practices, 3rd edition. Academic Press Publications.

**Related academic Journals:**

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***Instructor's Notes***