

SCHOOL	FACULTY OF ENVIRONMENT		
ACADEMIC UNIT	FOOD SCIENCE AND TECHNOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	FST501	SEMESTER	5
COURSE TITLE	FRUIT AND VEGETABLE SCIENCE AND TECHNOLOGY		
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 exercises	2		
Total	4	6	
<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>	Special Background		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (in 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

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

- classify fruits and vegetables into different categories
- describe the factors affecting the transport and storage of fruit and vegetables
- distinguish the different methods of fruit and vegetables processing
- perform the techniques related to analysis and processing of fruit and vegetables
- Carry out quality control techniques for raw materials and their products
- Evaluate the factors affecting the quality of processed fruit and vegetables

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...
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- Adapting to new situations
- Decision-making
- Working independently
- Team work
- Criticism and self-criticism
- Production of free, creative and inductive thinking
- Search for, analysis and synthesis of data and information, with the use of the necessary technology

SYLLABUS

LECTURE TOPICS:

Production-morphology-classification of fruits and vegetables, preservation of fruits and vegetables - environmental and biological factors that affect the preservation of fruits - vegetables after harvest. Chemical composition - relationship of ingredients with nutritional value, fruits suitable for processing, factors that affect the fruits. Cooling methods of fruits and vegetables, the freezing process and its effect on plant tissues. Tomato processing technology, vegetable processing technology, fruit processing technology, fruit juice technology. Quality control of raw materials and finished products, products with added sugar, product alterations.

LABORATORY TOPICS

1. Canning. Syrups-Salts
2. Peeling - Scaling
3. Preparation and control of canned fruits - canned vegetables
4. Check canned peaches.
5. Fruit - vegetable content of acids, soluble solids and vitamin C.
6. Jellies. Making jam. Quality evaluation of gels - jams.
7. Tomato paste control and processing.
8. Preparation of ketchup
9. Quality evaluation of fruit juices
10. Quality evaluation of frozen peas
11. Effect of freezing speed on the quality characteristics of fruits and vegetables.
12. Quality control of canned fruits - vegetables. Dehydration of fruits

TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY</p> <p style="text-align: center;"><i>Face-to-face, Distance learning, etc.</i></p>	Face-to-face																			
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</p> <p style="text-align: center;"><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 style="text-align: center;">TEACHING METHODS</p> <p><i>The manner and methods of teaching are described in detail.</i></p> <p><i>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></p> <p><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></p>	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;"><i>Activity</i></th> <th style="text-align: center;"><i>Semester workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">78</td> </tr> <tr> <td>Laboratory</td> <td style="text-align: center;">26</td> </tr> <tr> <td>Total contact hours and training</td> <td style="text-align: center;">104</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	<i>Activity</i>	<i>Semester workload</i>	Lectures	78	Laboratory	26	Total contact hours and training	104											
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<p style="text-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>Evaluation procedure performed in Greek.</p> <p>Written Evaluation</p>																			

ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

1.BOOK [22665]: Βιολογία και τεχνολογία των οπωροκηπευτικών μετά τη συγκομιδή, Καραουλάνης Γεώργιος Δ.

2.BOOK [3498]: Τεχνολογία & Ποιότητα Φρούτων & Λαχανικών, Άννα Αναγνωστοπούλου - Αικατερίνη Ταλέλλη

3.BOOK [17525]: Στοιχεία τεχνολογίας, μεταποίησης και συσκευασίας τροφίμων, Αρβανιτογιάννης Ιωάννης Σ.,Μποσνέα Λουλούδα Α.

4.BOOK [23027]: Τεχνολογία επεξεργασίας οπωροκηπευτικών, Καραουλάνης Γεώργιος Δ.

Performance Statistics of the last 2years			
Grade (descending order)	absolute frequency	relative frequency %	sum of success rates per class
FRUITS & VEGETABLES SCIENCE AND TECHNOLOGY			
6	81	60%	60%
7	19	14%	74%
8	20	15%	88%
9	12	9%	97%
10	4	3%	100%
	136	100%	