

## COURSE OUTLINE

### 1. GENERAL

<b>SCHOOL</b>	AGRICULTURAL SCIENCES		
<b>ACADEMIC UNIT</b>	FOOD SCIENCE AND TECHNOLOGY		
<b>LEVEL OF STUDIES</b>	UNDERGRADUATE		
<b>COURSE CODE</b>	FST_201	<b>SEMESTER OF STUDIES</b>	SECOND
<b>COURSE TITLE</b>	ORGANIC CHEMISTRY		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <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>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Lectures and laboratory work	3 (lect.) 2 (lab.)	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
<b>COURSE TYPE</b> <i>general background, special background, specialised general knowledge, skills development</i>	General background course		
<b>PREREQUISITE COURSES:</b>	Typically, there are not prerequisite course.		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	Greek.		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	No		
<b>COURSE WEBSITE (URL)</b>			

### 2. LEARNING OUTCOMES

<p><b>Learning outcomes</b></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"> <li><i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher</i></li> </ul>
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*Education Area*

- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

At the end of this course every student is expected to have obtained the main characteristics of organic compounds.

Moreover this course introduces the student to the most recent information on subjects as renewable sources of energy, biofuels, biodegradable plastics, environmental impact of pesticides.

Furthermore students will obtain the necessary knowledge that will help them to understand the content of next courses as “Food Chemistry”, ”Food Technology”, “Food Safety”, “Biochemistry”

By the end of this course every student will be familiar with the use of reagents, solvents and basic organic chemistry laboratory techniques.

### **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*

*Project planning and management*

*Adapting to new situations*

*Respect for difference and multiculturalism*

*Decision-making*

*Respect for the natural environment*

*Working independently*

*Showing social, professional and ethical responsibility and sensitivity to gender issues*

*Team work*

*Criticism and self-criticism*

*Working in an international environment*

*Production of free, creative and inductive thinking*

*Working in an interdisciplinary environment*

*.....*

*Production of new research ideas*

*Others...*

*.....*

Generally, by the end of this course the student will have develop the following general abilities (from the list above):

Autonomous (Independent) work

Group work

Respect to natural environment

Work design and management

### **3. SYLLABUS**

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Introduction. Nomenclature of organic chemistry. Classification of organic reactions. Conformation of molecules – stereochemistry. Isomerism. Saturated and unsaturated hydrocarbons (properties and reactions of alkanes, alkenes and alkynes, Organometallic compounds). Polymers, biodegradable plastics. Energy-Hydrocarbons-Biofuels. Carbonyl compounds. Lipids. Nitrogen-containing compounds Aromatic compounds and aromaticity, electrophilic aromatic substitution. Sugars (oligo- and polysaccharides). Basic Organic Chemistry Laboratory techniques

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

<p><b>DELIVERY</b> <i>Face-to-face, Distance learning, etc.</i></p>	Lectures and Laboratory practice face to face.	
<p><b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. Notes with the content of the course are uploaded on the internet, where from the students can freely download them using a password which is provided to them at the beginning of the studies.	
<p><b>TEACHING METHODS</b> <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>	<p><b>Activity</b></p>	<p><b>Semester workload</b></p>
	Lectures (3 conduct hours per week x 13 weeks)	39
	Laboratory work (2 conduct hours per week x 10 weeks)	20
	Laboratory reports (2 hours per week x 8 reports)	16
	Final examination (3 conduct hours)	3
	Hours for private study of the student	47
	<p><b>Total number of hours for the Course (25 hours of work-load per ECTS credit)</b></p>	<p><b>125 hours (total student work-load)</b></p>
<p><b>STUDENT PERFORMANCE EVALUATION</b> <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</i></p>	<p>1. Written examination after the end of the semester. The mark constitutes the 75% of the final grade (G<sub>75%</sub>). Minimum passing grade: 5.</p> <p>2. Reports following completion of each laboratory experiment. The mean mark constitutes the other 25% of the final grade (G<sub>25%</sub>). Minimum passing grade: 5.</p> <p>The final grade for the course is calculated by the final grade in the Lab (25%) and the grade of the final written examination (75%). The student must have secured a minimum grade of 5 in both Lab and the final written examination.</p>	

*examination of patient, art interpretation,  
other*

*Specifically-defined evaluation criteria are  
given, and if and where they are accessible to  
students.*

## **5. ATTACHED BIBLIOGRAPHY**

*- Suggested bibliography:*

1. Organic Chemistry by N. Alexandrou and A. Varvogli, Publisher Ziti
2. Organic Chemistry, by Meislich et.al., Publisher ΕΣΠΙ εκδοτική
3. Organic Chemistry, John McMurry, Cengage Learning

*- Related academic journals:*