

## 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>	<b>FST_X06</b>	<b>SEMESTER</b>	Winter
<b>COURSE TITLE</b>	BIOLOGICAL AGRICULTURE AND BIO FOODS		
<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	3	
	Seminars	1	
			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>	Elective Specialized general knowledge Field of Science (Biological Agriculture and Bio Foods)		
<b>PREREQUISITE COURSES:</b>	There are no prerequisite courses		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	Greek		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	No		
<b>COURSE WEBSITE (URL)</b>	<a href="https://eclass.upatras.gr/">https://eclass.upatras.gr/</a>		

### 2. 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*

The main object of the course is to provide knowledge on the cognitive subject of Organic Production. The course syllabus aims at educating students in Organic Production – Agriculture. It aims at understanding the subject as an interesting science, because in the context of food production and raw materials, organic production - agriculture is in perfect harmony with environmental factors and respects the consumer. Organic farming recognizes, regarding the production of plant and animal products, methods and techniques that have proven to be effective in the past and, on the other hand, have not, to an irreversible extent, burdened significant environmental factors. Finally, the main objective of the course is to train today's students and future policy makers in agriculture, that decision-making in agriculture should be based on implementing production systems with a future rather than a temporary perspective.

At the end of the course students will be able to:

- Get advanced knowledge which involves a critical understanding of theories and principles such as the production capacity of a habitat, the farming systems, the

planning of a farm's transition to organic farming, the quality of farming soils and irrigation water, soil fertility, crop rotation, plant protection and the production of quality agricultural products.

- Collect and interpret relevant data (typically within the cognitive field of Organic Production), to form judgment on relevant social, scientific or ethical issues related to agricultural production.
- Develop knowledge-based skills needed to continue further studying with a high degree of autonomy.
- Be aware of the tools and techniques of Organic Farming Management and how these are used to ensure the successful sustainable development of the countryside.
- Assess and classify the key productive factors of enterprises which are involved in organic production.
- Communicate information, ideas, problems and solutions to both qualified and non-specialized audiences as well as to work with their fellow students to create and present a project in a transition study from conventional to organic farming.
- Have the necessary knowledge and skills to understand the fundamental issue of protecting both the consumer and the environment in the organic production of plant and animal origin products.

#### **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*

*.....*

*Others...*

*.....*

By the end of this course the student will, furthermore, have developed the following skills (general abilities):

**Independent Work**

**Decision making**

**Teamwork**

**Respect for the natural environment**

### **3. SYLLABUS**

- Success in plant production is based on the right choice of species and variety, but also on the management of plant material with factors such as climate and soil. The latter two factors are in constant interference with the growing plants. In agriculture, and particularly in organic farming, value is attributed to the "production capacity of a habitat". This term includes the sum of the soil + climate productivity.
- Given the already existing bottlenecks in finding land available for agricultural use, the upcoming climate change, the thread of water scarcity, the environmental burden and food poisoning, the strategy of decision makers should be based on finding more productive plants and implementing production systems with a future rather than a temporary perspective.
- The future course of organic farming in the EU, as well as in other developed countries, will depend heavily on consumer behavior. Commerce has a key position on the further development of organic farming, because the demand for organic products is upward so

far and prices are thought to be reasonable. Exerting a strong pressure on commodity prices for organic products may create problems that are related to intense specialization and intensification of some crops or sectors, resulting in the deterioration of this original structure of organic farming. Those farms that operate closed, as far as possible, systems of plant and animal production have greater stability in this form of effects.

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

<p style="text-align: center;"><b>DELIVERY</b> <i>Face-to-face, Distance learning, etc.</i></p>	Face-to-face	
<p style="text-align: center;"><b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<p>Use of Information and Communication Technologies (ICTs) (e.g. powerpoint) in teaching. Communication with students: through e-mail, department's website and platform e-class. The lectures content of the course for each chapter are uploaded on the internet, in the form of a series of .pdf files, where students can freely download them from the platform e-class.upatras.gr</p>	
<p style="text-align: center;"><b>TEACHING METHODS</b> <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. 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>	<b>Activity</b>	<b>Semester workload</b>
	Lectures (3 hours per week x 13 weeks)	39
	Seminars (1 hour per week x13)	13
	Developing a project on the transition from conventional to organic farming	25
	Final examination (3 hours)	3
	Non-guided study	45
	<b>Total number of hours for the Course (25 hours of work-load per ECTS credit)</b>	<b>125</b>
<p style="text-align: center;"><b>STUDENT PERFORMANCE EVALUATION</b> <i>Description of the evaluation procedure 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 Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Written examination after the end of the semester (100%) including:</p> <ul style="list-style-type: none"> <li>• Multiple-choice questions</li> <li>• Benchmarking theory elements</li> </ul> <p>I. Written final exam (70%) comprising:</p> <ul style="list-style-type: none"> <li>- Short answer questions or multiple-choice questions</li> <li>- Solving problems related to organic products</li> <li>- Comparative evaluation of the theory</li> </ul> <p>II. Presentation of teamwork (30%)</p> <ul style="list-style-type: none"> <li>- Delivering written works and public presentation by Working Groups</li> </ul> <p>Grading scale: 1 to 10. Minimum passing grade: 5. Examination time: 3 hours.</p>	

#### 5. ATTACHED BIBLIOGRAPHY

1. Organic farming, Plant production, Sidiras Nikolaos K.,2005
2. Organic Fertilization and Crop Rotation, Sidiras Nikolaos K., 2004