

Course Title	Sustainable Agriculture/Animal Husbandry				
Course Code	ABF 413				
Course Type	Theory				
Level	Undergraduate				
Year / Semester	Fall Semester/7th Semester/4th year				
Teacher's Name	Dr. Iakovos Pantelides				
ECTS	4	Lectures / week	2 x 1.5 hrs	Laboratories / week	
Course Purpose and Objectives	<p>The aim of the course is to develop skills for supporting sustainable farming support systems that ensure the conservation of natural resources and the quality of produce. Particular reference is made to the current practices of conventional farming in vegetable, horticultural, greenhouse and other crops, as well as the consequences of applying intensive systems to both plant and animal production. The course aims to familiarize students with alternative forms of farming and certified production systems so that they can work as modern professional agronomists who will offer advice on applying sustainable methods to horticulture, or other crops as well as protecting livestock, the environment and the safety of the products produced for human health.</p>				
Learning Outcomes	<p>Upon successful completion of the course, students are expected to be able to apply the principles of sustainable agriculture and will be able to describe, distinguish and explain the major sustainable production systems in horticulture and other crops . They will be able to propose interventions that increase soil fertility and improve soil resources, and measures to control animal and plant diseases following an Integrated Pest Management or Organic Farming.</p> <p>Students will become familiar with methods to assess and manage plant and animal biodiversity and to calculate ecosystem services in vegetable crops, fruit trees and other agronomy crops.</p> <p>Students are expected to communicate effectively within a group and organize their time within the group so they can work together to gather the necessary data and present an essay on a subject relevant to the module. In addition, by doing autonomous work students should be able to study bibliography and make a presentation on a subject of their choice relevant to the course.</p>				
Prerequisites	NA	Required	NA		

Course Content	<p>LECTURES</p> <ul style="list-style-type: none"> • Introduction to Sustainable Agriculture, definition and principles. • Productive Systems and International Trends. • Problems caused by Conventional Farming (horticulture and arable crops). • Precision Agriculture. • Biodynamic Agriculture. • Organic Agriculture. • Cultivation practices for disease management in horticulture, greenhouse and arable crops. • Soil solarization. • Biological Control Agents. • Induced Resistance for disease control. • Composts and biofertilizers. • Plants resistance and tolerance against pathogens . • Integrated Pest Management in horticulture, greenhouse and arable crops. • Good Agricultural Practices – the GLOBALG.A.P. Standard • High Nature Value (HNV) Farming Areas. • Biodiversity and Sustainable Agriculture. • Ecosystem Services. • Practical Exercise for Calculating Ecosystem Services. • Sustainable Animal Husbandry • Organic Animal Husbandry.
Teaching Methodology	<p>Lectures</p> <p>Active participation in learning activities, discussion and resolving questions</p> <p>Individual and teamwork oral presentations</p> <p>Individual meetings for assay guidance and problem solving</p> <p>Independent study using the provided literature and reliable internet sources</p>
Bibliography	<p>(1) Teacher’s Course Presentations (in Greek).</p> <p>(2) Αειφορική Γεωργία & Ανάπτυξη, 2004, Β’ Έκδοση, Γεώργιος Κ. Σιάρδος και Αλέξανδρος Ε. Κουτσούρης, ISBN 960-8065-34-8, Εκδόσεις ΖΥΓΟΣ (in Greek).</p>

	<p>(3) Διαχείριση Εδαφικών Πόρων, 1999, Σπ. Σακελλαριάδης, Εκδόσεις ΖΗΤΗ (in Greek).</p> <p>(4) Sustainable Agriculture, 2003, 2nd Edition, John Mason, ISBN 0 643 06876 7, Landlinks Press.</p>
Assessment	<p>Final Examination: 65%</p> <ul style="list-style-type: none"> Tests include close-ended questions (multiple choice, fill-in, matching, etc.), short answer and full essay questions. The test contains knowledge questions and questions that the student needs to combine knowledge gained from the course. <p>Individual Presentation: 20%</p> <ul style="list-style-type: none"> The subject is of the student's choice and is relevant to the purpose and content of the course. <p>Teamwork Presentation: 15%</p> <ul style="list-style-type: none"> Assay is performed in groups of 2-3 students visiting different fields and try to evaluate and quantify ecosystem services based on actual data and / or bibliographic references.
Language	