

Quality and Certification Systems for Agricultural Products [998]

COURSE OUTLINE

(1) GENERAL

SCHOOL	ANIMAL BIOSCIENCES		
ACADEMIC UNIT	DEPARTMENT OF ANIMAL SCIENCE		
LEVEL OF STUDIES	Undergraduate [Major Elective]		
COURSE CODE	998	SEMESTER	5 th
COURSE TITLE	QUALITY AND CERTIFICATION SYSTEMS FOR AGRICULTURAL PRODUCTS		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	CREDITS
Courses: Theory & preparation of certification dossiers for traditional Greek agricultural products and foodstuffs		3	3
Total		3	3
COURSE TYPE	Developing skills		
PREREQUISITE COURSES:	No		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	Yes		
COURSE WEBSITE (URL):	https://mediasrv.aua.gr/eclass/courses/EZPY210/		
TEACHING STAFF:	S. Haroutounian		

(2) LEARNING OUTCOMES

Learning outcomes
Introduction to the concept of agricultural products quality and procedures for their certification. Main objective is to acquaint students the international, national and local quality systems and labels used for the agricultural products. The presentation of their concept, terminology and procedures will enable students to obtain an overview of the quality and certification processes of agricultural products. Additionally, the existing framework and procedures used for the certification of the intellectual and industrial property rights (patents) will also be presented. Final goal is enable students to understand the importance of certification in modern rural market as well as comprehend the transformation of agricultural products quality sector into a distinct scientific profession. Upon successful completion of the course, students will be able (according to Bloom) to: • Explain the critical features of various agricultural product quality systems, their links with certification procedures, and their connection to agricultural product marketing and promotion (Knowledge / Comprehension). • Identify and understand the basic requirements and procedures of different quality systems, and analyze methods for their successful application to ensure system adaptation for specific products or farms (Knowledge / Comprehension / Analysis). • Develop an application dossier for product certification under one of the EU quality schemes for agricultural products (Protected Designation of Origin-PDO, Protected Geographical Indication-PGI, Traditional Specialty Guaranteed-TSG, Island or Mountainous Product) (Application / Synthesis). • Compose a claim file for the certification of copyright and/or industrial property rights (Application / Synthesis). • Explain and apply quality procedures and labels, including: ○ Management systems according to International Standardization Organization (ISO) standards, e.g., ISO 9001 (quality), ISO 22000 (food quality), ISO 14000 (environmental quality) (Knowledge / Application). ○ Systems for specific agricultural productions (Knowledge / Application). ○ National-Greek system (AGRO) standards for farm management (Knowledge / Application). ○ Food Safety Assurance System (Hazard Analysis Critical Control Points-HACCP) (Knowledge / Application).
General Competences
Data analysis-synthesis, information mining. Application of relevant technologies Adapting new situations Work as individual Teamwork Working in a multidisciplinary environment

Respect of diversity and multiculturalism
 Respect the natural environment
 Exercise criticism and self-criticism
 Promotion of creative and inductive thinking

(3) SYLLABUS

- History and evolution of the agricultural product quality systems in Greece and Europe. The basic elements of agricultural product quality will be presented, including the history of metrology, the evolution of the regulatory framework for the quality and fraud of agricultural products and the connection of agricultural products quality with their geographical origin.
- Modern aspects of the agricultural products quality. Presentation of key approaches to agricultural product quality including safety, nutritional value, traditional character and biological action (functional foods).
- European poly for agricultural product quality. Detailed presentation of the specifications, necessary documentation, management requirements, as well as application and certification procedures applied for the Products of Designated Origin (PDO), Protected Geographical Indication (PGI), Traditional Specialty Guaranteed (TGS), systems developed for certifying flavored wines-spirits and special labels such as Island and Mountainous products. Case studies and product's additional value derived from the certification of its fame and link to production origin.
- Copyright & Industrial Property. Current legal framework at National, European and Global for safeguarding intellectual and industrial property rights. The concepts of invention in respect a product, method or industrial application and industrial design will be presented and linked with their market image. Finally, the necessary documentation for patent application to protect intellectual knowledge and/or products along with all required procedures will also be presented.
- Standard certification systems. Manuals, certification procedures and documentation for quality management systems (ISO 9001), food safety (ISO 22000, HACCP) and environmental performance (ISO 14000, EMAS).
- AGRO standards. The philosophy and specifications Greek AGRO certification system for agricultural production will be presented. Namely, AGRO 1-1 & 1-2 (Hazard Analysis), AGRO 2-1, 2-2, 2-2 / 1, 2-2 / 2, 2-2 / 3 (Integrated Management in Agricultural Production and AGRO 2-2 Specific for Peach, Cotton and Olive Crops), AGRO 3-1, 3-2, 3-3, 3-4 & 3-5 (Management System Ensuring Pork Quality), AGRO 4-1 & 4-2 (Management System for Quality Assurance of Fish Farming Products), AGRO 6 (Management System for Quality Assurance of Spinach and Sponge Production) and AGRO 7 (Production of Genetically Modified Free Products). Additionally, Standards for the Certification of Beef Traceability, Special Poultry Products and Organic Farming.
- Private quality labels and exporting certificates. The principal private agricultural quality labels and their corresponding quality requirements - certification procedures, with special focus on documentation and requirements to export agricultural products exported to the major markets, including the US, Russia, China and India.
- Product Safety Data Sheet. The respective standards for different product categories will be presented along with the process for their documentation with emphasis on identifying and classifying the risks arising from the agricultural products content.
- Traceability. The prevailing methodologies and principles of agricultural product labeling will be presented along with main methodologies used for documenting and identifying the origin of agricultural products.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face to face (theory-laboratory) and remote support guidance via E-mail	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Power point presentations and video projections during lectures Self-assessment test Support of student learning process via e-mail	
TEACHING METHODS	Activity	Semester workload
	Lectures	25
	Individual work	25
	Team work	5
	Case Study	5
	Literature Review and study	15
	Course total (25 h of workload per ECTS)	75
STUDENT PERFORMANCE EVALUATION	I. Theory a) The attendance of lectures by students is optional. b) Since the teaching mode of the course is experiential, students are graded through their individual assignments' evaluation. 1. Literature review implementation-presentation: at semester beginning each student with a distinct toxicological subject. After reviewing the relevant literature, each student presents the outcome which is graded as follows: i. teaching staff evaluation 65% ii. self and fellow students' evaluation 20% 2. Implementation of a case study 15% II. The evaluation language is Greek. III. The assessment criteria are communicated to the students.	

(5) ATTACHED BIBLIOGRAPHY

- All lectures are available at e-class as power-point presentations

Suggested EU regulations for study

ALL CURRENTLY IN USE LAWS AND REGULATIONS OF GREECE AND EU

- REGULATION (EU) No 1151/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 November 2012 on quality schemes for agricultural products and foodstuffs. • Commission Regulation (EC) No 1216/2007 of 18 October 2007 laying down detailed rules for the implementation of Council Regulation (EC) No 509/2006 on agricultural products and foodstuffs as traditional specialities guaranteed
- Commission Regulation (EC) No 1898/2006 of 14 December 2006 laying down detailed rules of implementation of Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs
- Commission Regulation (EC) No 628/2008 of 2 July 2008 amending Regulation (EC) No 1898/2006 laying down detailed rules of implementation of Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs
- Council Regulation (EC) No 1234/2007 of 22 October 2007 establishing a common organisation of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation)
- Council Regulation (EEC) No 1601/91 of 10 June 1991 laying down general rules on the definition, description and presentation of aromatized wines, aromatized wine-based drinks and aromatized wine-product cocktails
- Council Regulation (EC) No. 834/2007 of 28 June 2007 on organic production and labeling of organic products and repealing Regulation (EEC) No. 2092/91 • Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labeling of organic products with regard to organic production, labeling and control
- Commission Regulation (EC) No 1235/2008 of 8 December 2008 laying down detailed rules for implementation of Council Regulation (EC) No 834/2007 as regards the arrangements for imports of organic products from third countries
- Selection and use of the ISO 9000 family of standards
- Environmental management - The ISO 14000 family of International Standards
- ISO 22000:2005, Food safety management systems -- Requirements for any organization in the food chain
- ISO/TS 22004:2005, Food safety management systems -- Guidance on the application of ISO 22000:2005
- ISO 22005:2007, Traceability in the feed and food chain -- General principles and basic requirements for system design and implementation
- ISO/TS 22002-3:2011, Prerequisite programs on food safety -- Part 3: Farming
- Greek National Standards for Integrated Management in Rural Production and Livestock Farming (AGRO)

Relevant Journals

- Food Quality and Preference (<http://www.journals.elsevier.com/food-quality-and-preference/>)
- Journal of Food Quality ([http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1745-4557](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1745-4557))
- Journal of the Science of Food and Agriculture (J Sci Food Agr) Publisher: Society of Chemical Industry (Great Britain); Wiley InterScience (Online service), John Wiley & Sons.
- Journal of Agricultural & Food Industrial Organization (<http://www.degruyter.com/view/j/jafio>)
- Journal of Food Measurement and Characterization (<http://www.springer.com/food+science/journal/11694>)