University of West Attica – Athens, Greece

Department of Food Science and Technology

FST description of courses supervised in english short version

Course Code	7021-7022
Module	Specialization, Skills Development
Title:	**Science and Technology of Fats and Oils**
Teacher:	Ioannis Tsaknis
Contact:	jtsaknis@uniwa.gr
Level	undergraduate
Semester	7
Module Aims	The course aims to make students able to be responsible for quality control laboratories in the oil & fats industry, to design, organize and be responsible for production in the oil & fats industry.
Module Subject	Quality characteristics of olive oil and other vegetable oils, animal fats, oilseeds, margarines and spreads, oils and fats in bakery products, cooking oils, and salad oils. Classification of fats and oils. Fatty acid composition and glyceride structure of fats and oils. Control of non-glyceride constituents of fats and oils. Physical characteristics of fats and oils. Control of adulteration of fats and oils. Analysis of oilseeds, sampling analysis. Quality evaluation of frying oil. Extraction of vegetable and animal fats. Processing of fats and oils. Margarines/shortening production. Co-products of fats and oils. Mayonnaise production.
Number of Credits	8

Course Code	6041
Module	Specialization, Skills Development
Title:	**Food Quality and Safety**
Teacher:	Ioannis Tsaknis
Contact:	jtsaknis@uniwa.gr
Level	undergraduate
Semester	6
Module Aims	The course aims to make students able to: Apply Quality and Safety Management Systems in the production, processing, storage, transportation and the sales of food. Also the implementation of Environmental Management Systems as well as Integrated Management Systems in the different food categories.
Module Subject	Basic principles of quality management. Quality management systems ISO 9000. Total Quality Management (TQM). Environmental Management Systems (EMAS Regulation, ISO 14001 standard). Good Manufactural Practice. Good Hygiene Practice. Food Safety Management Systems (HACCP System, NTERNATIONAL FOOD STANDARD, HALAL System, BRITISH RETAIL CONSORTIUM). Integrated Management Systems (AGRO 2 - 2-1 & 2-2).
Number of Credits	5

Course Code	8011-8012
Module	Special background - Specialization, Skills Development
Title:	**Milk and dairy products Science and Technology**
Teacher:	Ioannis Tsaknis & Spyridon Koulouris
Contact:	jtsaknis@uniwa.gr & skoul@uniwa.gr
Level	undergraduate
Semester	8

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University of West Attica – Athens, Greece

Department of Food Science and Technology

FST description of courses supervised in english short version

Module Aims	The module aims to familiarize the students with: • The milk composition, including the chemistry, structure and function of its components • The changes occurring in milk and its ingredients during processing • The production and evaluation of dairy products • The performing of the necessary chemical and other analyzes on raw and auxiliary materials and on finished products. • Other important for the dairy industry issues on hygiene, nutrition, packaging, safety and quality assurance.
Module Subject	Scientific and technical principles relating to the commercial processing of milk from the farm to the consumer. Including liquid, concentrated, dehydrated and frozen milk products, butter, cheese and fermented dairy products. The course emphasizes both on theory and practical applications. The module is organized in the following units: Milk composition - Ingredients. Factors influencing the composition of milk Physicochemical characteristics of milk components and factors affecting each of them. Fractional separation and processing of milk components. Physicochemical properties: proteins and enzymes, lipids and liposomes, carbohydrates, vitamins and minerals of milk. Organic function of milk components. Milk processing equipment Effect of heat on milk and its ingredients: pasteurization and sterilization of milk. Milk liposomes: homogenization, separation, clarification. Condensation, evaporation, membrane separation and dehydration of milk. Microbiology and fermentation products of milk. Coagulation: principles of cheeses. Crystallization of fat: butter preparation. Freezing: ice cream and frozen desserts. Quality parameters of milk and its products. Production, collection, processing, storage and distribution of milk
Number of Credits	7

Course Code	
Module	
Title:	**Introduction to Physical Chemistry**
Teacher:	Ioannis VAMVAKAS
Contact:	ivamvakas@uniwa.gr
Level	BSc
Termin	Winter semester
Module Aims	Aim of the course is to introduce most important elements of physics and chemistry to better understand phenomena in chemical reactions.
Module Subject	Phase transitions and thermodynamics of transitions. The first law, internal energy. Enthalpy: definition, changes and temperature dependence, standard enthalpies of formation. Entropy and the second law. Gibbs energy. Helmholtz energy. Photochemical reaction.
Number of Credits	3
Course Code	
Module	
Title:	**MATHEMATICS**
Teacher:	Ioannis VAMVAKAS
Contact:	ivamvakas@uniwa.gr
Level	BSc
Termin	Winter semester
Module Aims	To teach students the basic concepts and essential techniques in linear algebra, functions, integral calculus, and ordinary differential equations.
Module Subject	Matrices identities, determinants, study of a function, monotony, derivative, integral calculus, indefinite integrals of common functions, Properties of definite integrals, integrating with u-substitution, integration by parts, Improper integrals, differential equations introduction, verifying solutions for differential equations, separation of variables, identifying separable equations, approximation with Euler's method.

University of West Attica – Athens, Greece

Department of Food Science and Technology

FST description of courses supervised in english short version

Number of Credits	7

Course Code	
Module	
Title:	**Physics**
Teacher:	Ioannis VAMVAKAS
Contact:	ivamvakas@uniwa.gr
Level	BSc
Termin	spring semester
Module Aims	Aim of the course is to teach students think critically and use appropriate concepts to analyze qualitatively problems or situations involving the fundamental principles of physics, and to use appropriate mathematical techniques and concepts to obtain quantitative solutions to problems in physics.
Module Subject	Physics is an introduction to classical mechanics and selected topics of modern physics. The course goals include presentation and understanding of fundamental physical laws and basic principles as well as methods of applying them to practical problems. It aims to the development of a feel for the scientific method and understanding of problem solving techniques. Overall the course intends to provide the necessary knowledge and tools for the subsequent studies.
Number of Credits	8

Course Code	7052
Module	Elective
Title:	**Current Nutrition topics**
Teacher:	Kanellou Anastasia
Contact:	Akanellou@uniwa.gr
Level	BSc
Semester	Winter semester
Module Aims	The students to deepen their knowledge and awareness to nutrition issue arising, as well as the consumer dietary needs
Module Subject	Dietary habits of today, food supplement, light food products, functional food, organic food, alternative diets-vegetarism, food allergies-intolerance, GMOs, dietary guidelines for specific population groups, basic clinical nutrition topics, obesity and weight control, food additives-artificial sweeteners, probiotics and other
Number of Credits	3 ECTS

Course Code	4041
Module	
Title:	**Human Nutrition**
Teacher:	Kanellou Anastasia
Contact:	Akanellou@uniwa.gr
Level	BSc
Semester	Spring semester
Module Aims	The students to know the basics in human nutrition as well as the role of food ingredients
Module Subject	Carbohydrate, fats, lipids, vitamins, minerals, water, dietary guidelines, Mediterranean diet, energy needs and body weight calculations, the digestive truck, food metabolism, food groups and the major nutrients

University of West Attica – Athens, Greece

Department of Food Science and Technology

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Number of Credits	4 ECTS

Course Code	7051
Module	
Title:	**Food Product Development**
Teacher:	Kanellou Anastasia
Contact:	Akanellou@uniwa.gr
Level	BSc
Semester	Winter semester
Module Aims	The students to know the current consumer needs and dietary guidelines as well as the strategies to contribute positive in developing a new food product to fill a market gap
Module Subject	New idea strategies, consumer and food market needs, novel foods, functional food ingredients, sensory analysis, nutrient claims, case studies, the role of the food technologist in developing new food products
Number of Credits	3 ECTS

Module	
Title:	**Food Packaging**
Teacher:	Papadakis Spyros
Contact:	sepapad@uniwa.gr
Level	
Semester	Winter semester
Module Aims	
Module Subject	**The theory lectures cover the following subjects:** Definitions and functions of food packaging. Glass packaging. Metal packaging. Corrosion of metallic containers. Plastic packaging. Permeability and mechanical properties of thermoplastic polymers. Processing and converting of thermoplastic polymers. Paper and paper-based packaging materials. Filling and sealing of food packages. Aseptic processing and packaging. Modified atmosphere packaging. **Laboratory exercises deal with the subjects:** Evaluation of the double seam of metal containers. Integrity evaluation of aseptic packages. Study of the internal corrosion of tinplate cans. Study of the corrosion of Fe and Al. Modified atmosphere packaging. Permeability of thermoplastic polymers to water vapor. Shelf life determination of moisture sensitive foods. Identification of plastic resins with the burning test and the density test. Layers' separation of laminates and thickness measurement of each layer. Mechanical properties of polymers. Edible membranes.
Number of Credits	

Module	7031-7032
Title:	**SCIENCE AND TECHNOLOGY OF FISH AND FISHERY PRODUCTS**
Teacher:	Vladimiros Lougovois
Contact:	vloug@uniwa.gr
Level	BSc
Semester	winter semester

University of West Attica – Athens, Greece

Department of Food Science and Technology

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Module Aims	
Module Subject	**Lectures**: Fisheries classification & anatomy. Physical properties, composition & yield. Nutritional value of fishery products. Post-mortem changes (sensory, biochemical, microbiological). Influence of post-harvest handling on quality and storage life. Seafood preservation & processing technologies. Assessment & management of seafood quality and safety. **Laboratory classes**: Bony fish anatomy, physical composition & yield. Chilling by use of slurry ice. Assessment of freshness quality & spoilage of wet fish (EU sensory scheme, QIM, GR-Torrymeter, TVB-N, SSOs). Determination of glaze (frozen fishery products). Quality & safety indices of processed seafood (TBARS, colour, water phase salt, a_w, pH, sensory characteristics of salted-dried-smoked fish).
Number of Credits	7

Module	6051-6052
Title:	**SENSORY EVALUATION OF FOOD**
Teacher:	Vladimiros Lougovois
Contact:	vloug@uniwa.gr
Level	BSc
Semester	Spring semester
Module Aims	
Module Subject	**Lectures**: Senses & perception. Principles of sensory assessment. Sensory analysis test methods. Organizing & conducting sensory tests. Sensory attributes of food products (appearance, odour, flavour, texture). Importance of sensory analysis in food product development. Application of statistics in sensory analysis of foods. **Laboratory classes**: Discriminative tests (paired comparison test, duo – trio test, triangle test, ranking test). Descriptive methods (structured scaling, quality index method, profiling, quantitative descriptive analysis). Preference – acceptance tests (paired comparison preference test, ranking test, hedonic scaling). Statistical processing of sensory data.
Number of Credits	7

Course Code	
Module	
Title:	**Introduction to food microbiology**
Teacher:	
Contact:	
Level	
Termin	
Module Aims	
Module Subject	
Number of Credits	

Course Code	
Module	
Title:	**Food Biotechnology**
Teacher:	

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University of West Attica – Athens, Greece

Department of Food Science and Technology

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Contact:	
Level	
Termin	
Module Aims	
Module Subject	
Number of Credits	

Course Code	
Module	
Title:	**Food Microbiology and Microbial Analysis**
Teacher:	
Contact:	
Level	
Termin	
Module Aims	
Module Subject	
Number of Credits	

GREEK LANGUAGE AND CIVILIZATION COURSE

COURSE DESCRIPTION

Offered to all Faculties and Departments of Campus 1 and Campus 2 of the University of West Attica.
Semester: It is offered during both winter and spring semesters
Weekly hours: 4
ECTS: 6
Prerequisite course: -
Course offered to incoming Erasmus student: Yes (in English)

Course goals

The aim of the course is to enable students (non-native speakers) to use the Greek language in everyday life situations in the best possible way, and, at the same time, learn about the Greek civilization.

The course is based on the Web Edition of Filoglossia http://www.xanthi.ilsp.gr/filog/ which is a multimedia program for beginners composed of 15 Chapters.

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The language material is mainly based on the communicative approach; therefore, the chapters refer to real life situations (e.g. going shopping, apologizing etc.)
Each chapter consists of the following components: (i) dialogue, (ii) basic vocabulary, (iii) grammar and (iv) useful phrase. Each component is accompanied by a variety of exercises for developing language skills.

Main features:
Audio and video files with native speakers
Translation into English
Vocabulary exercises
Grammar exercises
Useful phrases

Course Content

The course starts with the basics: the alphabet and simple everyday necessary words e.g. weekdays, articles, numbers, the time, etc. To start with, students must develop the skills of reading and writing Modern Greek (Dimotiki) words. Next, the focus is on the grammar and syntax of the Greek language, so that the students can be able to understand and communicate in simple everyday conversations.

Teaching and Learning Process – Assessment

2 hours face-to-face lectures
2 hours online teaching using the Web Edition of Filoglossia (http://www.xanthi.ilsp.gr/filog/)

In order to be allowed to take part in the final exam, students must have attended 80% of classes.

There is a final written exam at the end of the semester, and in the case of students who have to leave at an earlier date, there is another exam given to them.

Activity	***Workload***
Lectures and Lab	60
Homework assignment and study	90
Total	150

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