

FALL COURSE DESCRIPTIONS

Students can earn from 12 to 15 credits. All courses at Perrotis are offered in English and receive 3 US credits each.

Note: All courses marked with * need a minimum of five students to run.

Perrotis College courses support the school's philosophy of learning by doing, offering hands-on experience in our labs or fields. Students gain a unique European perspective into the agro-technology sector and benefit from the school's holistic approach.

Students can choose courses from the following fields of study:

- ✓ Sustainable Agriculture & Management
- ✓ Food Science & Technology
- ✓ International Business & Food Business Management
- ✓ Animal Science
- ✓ Environmental Science
- ✓ Digital Marketing

Greek Cultural Experience

Greek Cultural Experience is a mandatory course for all terms.

This core course introduces students to Modern Greek life and culture, including basic elements of Greek language, history, society, cuisine and traditional dance. The course enriches the students' experience by visiting important historical, religious and cultural sites throughout Greece. Students are introduced to basic concepts that enable them to understand and respond to cultural differences.

Sustainable Agriculture & Management

Introduction to ICT Systems for Agriculture and the Environment *(Year 2= 4000 level class)*

Gain an introduction to the most updated computer operating systems, and useful software and hardware used for editing, calculations and other farm management information and decisions. Examples for ICT agricultural applications and environment are included. Upon completion students are able to describe, utilize information technologies and demonstrate skill in ICT applications.

Management- Business Administration *(Year 2= 4000 level class)*

The managerial approach to organizational behavior, particularly in the context of food and agro-environmental businesses, is introduced. Students are encouraged to develop a critical appreciation of the structure, systems and operation of organizations, the process of management, the behavior of people at work and the influence of such systems on human behavior. Students also develop an understanding of the need for organizational effectiveness and the importance of the role of management as an integrating activity. A wide range of issues are explored, from the individual level up to the macro-organizational level, emphasizing the complex inter/intra-relationships between individual and group behavior, organizational structure and organizational processes.

Agricultural Marketing *(Year 2= 4000 level class)*

Students are introduced to theories, concepts and problems of marketing goods and services. Topics include promotion, placement and pricing strategies for products. In addition students will learn the role of research in marketing. Building on the above, students are introduced to the tools, factors and concepts used by management in planning, establishing policies and solving marketing problems. Specific topics include consumer demand and behavior, location analysis, marketing, functions, institutions, channels, prices and public policy.

Principles of Microbiology and Chemistry *(Year 2= 4000 level class)*

The course introduces students to main concepts of inorganic and organic chemistry. Furthermore, students are introduced to microorganisms, their nature and properties and how they relate to the environment and to food coming from soil. Upon completion, students are able to apply and exploit this knowledge for the optimal solving of problems relevant to the abiotic environment (soil) and the living systems (plants and animals).

Environmental Technology and Agricultural Machinery *(Year 2= 4000 level class)*

The fundamentals of environmental technology and agricultural machinery use, including safe use and basic repair techniques of field tractors and implements are explored. Emphasis is also given toward selection investment, management of farm machinery and environmental sustainability.

Plant Physiology *(Year 3= 5000 level class)*

How do plants grow? More importantly how can they grow faster, better, stronger? Learn about the fundamentals of plant physiology and understand the biological processes affecting plant growth, development and yield. This course helps students understand the “plant” component of the soil-plant-atmosphere continuum, providing a background for the sustainable management of production systems.

Principles of Precision Agriculture & Environmental Sustainability *(Year 3= 5000 level class)*

The key principles of precision agriculture and environmental sustainability are addressed. Students learn about the design and implementation of simple precision agriculture management plans, complemented by field experience using key precision agriculture tools and technologies. The course addresses how precision agriculture relates to changes in agro-environmental systems through EU Common Agricultural Policy.

Principles of Plant Pathology *(Year 3= 5000 level class)*

Fundamental knowledge of plant-microbe interactions is needed to identify symptoms of major diseases and diagnose the causes of diseases. Students learn about major management practices for disease control, from understanding how pathogens attack to soil climate conditions favoring plant disease.

Introduction to Livestock Science *(Year 3= 5000 level class)*

This introductory course aims to inform students about the cell function and multiplication process; and the physiology of body functions in animals used in farm production; to introduce them to Mendelian genetics, and to enable them to identify the differences between qualitative and quantitative inheritance. The Course also examines the reproductive mechanisms during the productive life cycle of an animal; as well as housing and environmental concerns as related to productivity and quality assurance.

Research Methods- Statistics *(Year 3= 5000 level class)*

In order to gain a representative sample from large amounts of data, statistics has become a major tool in biological sciences. This course provides students with basic statistical knowledge, allowing students to properly perform data analysis, produce appropriate graphs, correlate data, use predictions models, and interpret the statistical analysis.

Waste Management *(Year 3= 5000 level class)*

This course introduces students to specialized knowledge in areas of waste management including wastewater, solid waste and air pollution. Students develop an understanding of the complex environmental systems and growing problems associated with waste production and disposal in a developed society.

Post-Harvest & Olive Processing *(Year 4= 6000 level class)*

This Course introduces students to the main practices and methods exercised during olive harvesting and the process right after the harvesting (postharvest) of table olives and olives for olive oil production. Factors affecting table olives and olive oil quality at postharvest and final processing are addressed.

Farm Management *(Year 4= 6000 level class)*

Students develop a deep understanding of farm management skills and the implications of running a farming business. The course covers how to prepare budgets and business plans, analyze the financial aspects of running the business (financial statements and cash flow analysis) and ways to improve productivity in terms of total production. The course also addresses how to apply principles of sustainable economy in farm management.

Medicinal & Aromatic Plant Production *(Year 4= 6000 level class)*

The history, importance and main cultural practices involved in sustainable medicinal and aromatic plant production are examined in this course. Agronomic characteristics, climatic and soil requirements, propagation methods nursery techniques, planting and maintenance are covered, with an emphasis on organic and integrated crop production methods.

GIS in Agriculture & the Environment *(Year 4= 6000 level class)*

GIS (Geographic Information System) allows us to visualize and interpret data in order to understand patterns, relationships, and trends. In this course, students are introduced to GIS software and technology as well as its agricultural applications. Data relating to Earth's surface is very applicable to agriculture and students work with GIS software in order to evaluate land, soil and crop systems to provide optimum management solutions, integrating multiple layers of information. This course emphasizes hands-on experience working with producers, vendors, and researchers collecting data; developing spatial databases, analyzing data; and communicating findings.

Horticultural Science *(Year 4= 6000 level class)*

The study of ornamentals and edibles dates back thousands of years and continues to be an important field of study. Students learn the fundamentals of horticultural science (fruit, vegetable, flower plants) as well as about new and innovative production systems and important aspects of their production management.

Food Science & Technology

Principles of Microbiology and Toxicology (Year 2= 4000 level class)

This course unifies biology, microbiology and toxicology to better understand the sources of foodborne diseases. Information related to the toxic substances present in food as endogenous ingredients, as exogenous factors from the environment, as products of interaction of ingredients in the manufacture and as toxins of microorganisms is also covered. The course also explores the types of pathogenic microbes and toxicants present in food systems, (including water), their routes of exposure and modes of action, as well as their effects on human health and the environment.

Food Marketing (Year 2= 4000 level class)

This course introduces students to theories, concepts and problems of marketing goods and services. Topics include promotion, placement and pricing strategies for products. In addition students will learn the role of research in marketing. Building on the above, students are introduced to the tools, factors and concepts used by management in planning, establishing policies and solving marketing problems. Specific topics include consumer demand and behavior, location analysis, marketing, functions, institutions, channels, prices and public policy.

Advanced Biochemistry: Enzymes & Metabolism (Year 3= 5000 level class)*

This course covers certain advanced aspects of biochemistry pertaining to biological systems and food science. Students gain an understanding of the structure and mechanism of action of enzymes and enzyme inhibitors. Topics covered include main cell metabolic pathways and their role in physiology as well as the metabolism of food macromolecules (carbohydrates, lipids, and proteins). Lab work with certain biochemical reactions which are important in food science is included.

Applied Food Law (Year 3= 5000 level class)*

The principles, methods and legal requirements involved in foodstuff contaminants complaints are addressed. Students learn the EU legal framework which regulates the food industry, including available statutory defenses.

Microbiological Examination of Food (Year 3= 5000 level class)*

Course content covers the principles and practice of microbiological analytical techniques. Students gain an understanding of the main microbiological techniques used in the food industry. The role of the food microbiologist is discussed and students learn to apply appropriate analytical techniques with reference to food safety.

Nutrition (for non-majors) (Year 3= 5000 level class)*

This course provides a sound, basic understanding of the role and function of macronutrients, micronutrients and energy balance in both the body and in population health. The effect of micronutrient deficiency and excessive intake is also explored.

Processing Technology (Year 3= 5000 level class)*

The course provides technical knowledge and understanding of industrial processing of food in a general and wide-ranging context while assessing and evaluating methods, equipment and control parameters. Topics covered include equipment selection, performance and suitability as well as process control systems.

Advanced Food Biochemistry (Year 4= 6000 level class)

This course explores the complex chemical reactions and processes that occur in food components during storage, processing, and consumption. It delves deeper into the molecular and biochemical aspects of food and provides insight into how various factors can influence the quality, safety, and nutritional value of food products. The course teaches students to relate the fundamental chemistry of food molecules to physiological effects, sensory properties and aspects of food toxicology and allows them to critically discuss the functional behavior of food constituents and the underlying chemistry and biochemistry involved. *Prerequisite:* 2000 level chemistry/biochemistry or its equivalent.

Contemporary Nutrition *(Year 4= 6000 level class)*

This course, which is revised continuously as new information becomes available, covers multiple aspects of nutrition on human health and food industry practices. Scientific controversies relevant to nutrition and the food industry are also discussed.

Food Biotechnology *(Year 4= 6000 level class)*

In this course, students gain knowledge and understanding of the development and application of biotechnology. This includes molecular biology, applied enzymology and intact cellular systems and their role in food materials and processing. Historical and traditional aspects are covered as well as case studies in the food industry.

International Business

Management I *(Year 2= 4000 level class)*

With this course, students are introduced to the managerial approach to organizational behavior. The student is encouraged to develop a critical appreciation of the structure, systems and operation of organizations, the process of management, the behavior of people at work and the influence of such systems on human behavior. The course is designed to give the student an understanding of the need for organizational effectiveness and the importance of the role of management as an integrating activity. It covers a wide range of issues from the individual level up to the macro-organizational level, emphasizing the complex inter/intra-relationships between individual and group behavior, organizational structure and organizational processes.

Marketing I *(Year 2= 4000 level class)*

This course introduces students to theories, concepts and problems of marketing goods and services. Topics include promotion, placement and pricing strategies for products. In addition, students learn the role of research in marketing, by applying projective techniques, as well as the role branding plays in the marketing strategies. Building on the above, students are introduced to the tools, factors and concepts used by management in planning, establishing policies and solving marketing problems.

Business Environment I *(Year 2= 4000 level class)*

In this class, students gain a systemic understanding of business. The students develop an appreciation of how economic, political, societal and technological variables influence organizational structure and the ability of companies to meet customer requirements in a profitable manner. In addition, the course contributes to the creation of a sound foundation of knowledge and understanding of the agricultural and food sector and its role in modern society and economy.

Business Management *(Year 3= 5000 level class)**

With this course, students gain a systemic understanding of how economic, political, societal and technological variables influence business structure and the ability of companies to meet customer requirements. Students also gain knowledge and understanding of the agricultural and food sector and its role in modern society and economy.

Financial Management *(Year 3= 5000 level class)**

The course reviews the financial institutions, sources of credit, criteria used to evaluate loan requests and financial accountability. Through various methods, including conducting research on an agro-business or food company, this course explores the application of a range of financial analysis and planning tools, asset evaluation and risk management, capital budgeting and capital structure.

Quality in the Agri-Food Sector *(Year 3= 5000 level class)**

In this course, students review minimum legislative standards required for food products to satisfy customer preferences. The responsibilities and liabilities of the consumer and manufacturer are also addressed.

Industrial Food Processing (Year 3= 5000 level class)*

This course provides basic technical knowledge and an understanding of industrial processing with an emphasis on methods, equipment and control parameters.

Consumer Behavior & New Product Development (Year 3= 5000 level class)*

Consumers select, purchase, use, evaluate, and dispose of products and services that will satisfy their needs. This course introduces students to the social science concepts, principles, and theories that explain consumer behaviors. Students learn to identify the needs of the consumer and manufacturer for new food products, review an area of food not fully exploited where a new product could be introduced and describe the development of this new product.

Retail Management (Year 4= 6000 level class)

This course provides an understanding of fundamental retail management issues and concepts as well as the relationship between marketing and retail. Emphasis is placed on the food and drink retail sector and on issues such as location, operational organization, retail policy development and control, promotions and legal and ethical considerations.

International Marketing Management (Year 4= 6000 level class)

This course introduces the fundamentals of international marketing, including entry strategies, risk assessment, global branding, cultural adaptation, regional trading blocks and intellectual property protection.

Corporate Social Responsibility (Year 4= 6000 level class)

Corporate Social Responsibility is the initiatives a company takes to understand its effects on environmental and social wellbeing and how it chooses to take responsibility for its actions. In this course students apply the concepts of CSR in the context of the agriculture and food and drinks sectors.

Advertising and Branding (Year 4= 6000 level class)

Students examine the importance of advertising, the role branding plays in marketing strategies and explore brand equity. The course introduces students to basic advertising terminology, enables them to develop marketing skills to better understand practical and theoretical issues involved in branding and advertising, Students develop teamwork skills, in particular: organization; negotiation; delegation; co-operation; leadership.

E-commerce (Year 4= 6000 level class)

The marketing aspects of e-commerce are introduced in this course as well as the theory and practice of doing business over the internet. The course covers topics such as prospects for business-to-business and business-to-consumer e-commerce and options for doing business on the internet.

Accounting (Year 4= 6000 level class)

The course covers the fundamentals of accounting impacting sound business decisions, including double entry systems, journals and ledgers, accounting cycles, accumulation of financial data, payroll procedures and records, and methods of reporting. Students learn to prepare an income statement and balance sheet, compute a trial balance and explain its purposes, identify and follow the steps in the accounting cycle and present a financial statement.

Animal Science

Animal Welfare (Year 3= 5000 level class)*

This course identifies and discusses controversial issues regarding the well-being of livestock as opposed to productivity and entrepreneurial goals of the animal industry. Topics discussed include living conditions, hygiene and diet. Students gain an understanding of why standards and actions are crucial and awareness of organizations and legislation involved in animal welfare.

Management of Livestock and Production (*Year 4= 6000 level class*)*

Contemporary management practices that enhance livestock productivity are addressed in this course. Also covered are product quality assurance, livestock well-being, and cost-effective parameters. Students develop entrepreneurial skills related to livestock management. Issues related to food security, legislation, and genetics are also discussed.

Nutrition and Contemporary Feeding Systems - Cattle and Poultry (*Year 4= 6000 level class*)*

Students learn fundamental concepts in digestion and metabolism. Nutrients and feeds required for livestock maintenance and production are identified and students have the opportunity to create feed firsthand. Principles of food analysis are also covered as well as the relation of nutrition to other constraints in animal production. Study visits to commercial factories and farms are included.

Environmental Science

Principles of Ecology (*Year 2= 4000 level class*)*

This course is devoted to introducing students to all aspects of environmental chemical analysis including hazardous contaminants in air, water, sediment and soil pollutants (including both organic and inorganic pollutants). It also covers the rapid changes and development in the field of environmental analytical chemistry, state of the art sample collection techniques and techniques for detection of environmentally harmful substances. Students gain insight into the use of instrumental chemical analysis techniques including UV-Vis spectrophotometry, High-Performance Liquid Chromatography (HP-LC), Liquid Chromatography-Mass Spectrometry (LC-MS), Gas Chromatography-Mass Spectrometry (GC-MS) and Inductively Coupled Plasma-Mass Spectrometry (ICP-MS).

Climate Change throughout History (*Year 2= 4000 level class*)*

This course provides a sociological approach to environmental issues. It investigates the environmental and social impact of industry and policy responses. It also deals critically with environmental controversies within social science and the environmental movement. Emphasis is given to current trends in industrialization, urbanization, and globalization, analyzing the impacts these trends have on human health, environmental sustainability, and equity, while further examining a range of policy options available for responding to current problems.

Principles of Environmental Hydrology (*Year 2= 4000 level class*)*

Through this course, students are equipped with knowledge on the principles of physical hydrology, with an overview of processes that determine the source, amount and flows of water in the environment. Students gain an understanding of the physical processes that govern the movement and storage of water and learn to quantify hydrological variables from both field observations and calculations. The students learn how hydrological systems operate. Additionally, they learn to use a wide range of analytical methods, including computer software to analyze relevant data while also obtaining the skills to assess hydrological problems and make recommendations about strategies and plans for urban and rural runoff management that mitigate the challenges of climate change.

Environmental Analytical Chemistry (*Year 3= 5000 level class*)*

Students are introduced to all aspects of environmental chemical analysis including hazardous contaminants in air, water, sediment and soil pollutants (including both organic and inorganic pollutants). The rapid changes and development in the field of environmental analytical chemistry, state of the art sample collection techniques and techniques for detection of environmentally harmful substances are also discussed. Students gain insight into the use of instrumental chemical analysis techniques including UV-Vis spectrophotometry, High-Performance Liquid Chromatography (HP-LC), Liquid Chromatography-Mass Spectrometry (LC-MS), Gas Chromatography-Mass Spectrometry (GC-MS) and Inductively Coupled Plasma-Mass Spectrometry (ICP-MS).

Smart Cities (*Year 3= 5000 level class*)*

This course focuses on the core challenges facing our increasingly 'smart' cities, from their operational functions and planning through to management and control. The module reflects the changes that technology is making to

the operation of, and our understanding of, the city, and gives students the technical and theoretical skills needed to make a difference to the planning of the cities of today and tomorrow. The Smart Cities module will introduce the concept of smart cities, which brings together hard infrastructure, social capital including local skills and community institutions, and (digital) technologies to fuel sustainable economic development and provide an attractive environment for all.

Sustainable Design (Year 3= 5000 level class)*

The course develops a deep understanding of strategic environmental and design approaches in various levels of decision making. Students are introduced to eco-efficiency methods to be able to evaluate a city or a house plan, to assess the sustainability of research proposals on the circular economy or eco-design, to work in interdisciplinary environments and to collaborate with scientists from various fields to solve issues related to improving the quality of the environment. Students should be familiar with suitable software for sustainable design evaluation.

Environmental Ethics, Policy and Legislation (Year 3= 5000 level class)*

The course is devoted to providing an understanding of ethical and value-related issues. Interdisciplinary in scope, the module draws on other fields of academic inquiry and builds on scientific understanding by bringing human values, moral principles and improved decision making into conversation with science. Students are encouraged to review the fundamental concepts, underlying assumptions and major limitations of current approaches, thus developing a critical understanding. The course also provides a better understanding of the tools available for environmental policy and legislation, and evaluates the impact of policies on the economy, society and the environment. Additional analyses of the nature and efficacy of the already existing approaches to environmental policy and legislation will be delivered.

Circular Economy (Year 3= 5000 level class)*

The course provides an in-depth exploration of the concept of the circular economy and equips the student with the skills and knowledge required to accelerate circular economy. The course introduces the student to the basic principles of circular economy, while exploring specific case studies in various industry fields such as food, fashion, built environment and cities, as well as biodiversity and climate. Students will get familiar with the available techniques, tools and resources for the implementation of circular economy in various fields, thus being able to apply their circular thinking and circular design strategies.

Marine Biology (Year 3= 5000 level class)*

This course approaches a high-level awareness of marine life through advanced knowledge of the diversity, organization and threats to the marine world. Students learn the key factors influencing marine ecology, developing the ability to identify the basic groups of marine organisms, the study of the biology of the organisms therein and the analysis, evaluation and communication of marine ecological data. The course provides an introduction to the consolidation of anthropogenic actions in the marine environment and the exploration of the basic harmful ecosystem impacts, such as industrial pollution, micro-plastics, climate change, invasive species, habitat destruction and over-exploitation.

Digital Marketing

Introduction to Digital Marketing (Year 2= 4000 level class)

Through this course, students learn about the role of digital marketing and its contribution to business success. Students are introduced to the concept of generic and digital marketing and will develop an understanding of, and an ability to apply conceptual models together with the various marketing tools and techniques.

Introduction to Marketing Data Analysis (Year 2= 4000 level class)

This course allows students to develop an understanding of the key marketing trends in the field and further develop their appreciation of procedures, frameworks and technology for gathering information affecting the promotion and selling of products and services. Additional topics include software tools, giving students the specialized skills needed to gather, analyze and evaluate information.

Principles of Law I *(Year 2= 4000 level class)*

The course provides an introduction to the main legal issues which affect the business world and practical case studies to help the student relate the law to real world business. Students develop an understanding of the essential elements of the English legal system and learn to identify legal rules and how they affect law in the business world.

Fundamentals of Search Marketing *(Year 2= 4000 level class)*

This course explores how to maximize an organization's search engine visibility using both organic search techniques (SEO) and Pay-Per-Click (PCC) campaigns. The benefits that arise from distributing relevant content marketing messages to enhance search traffic, and develop broader engagement levels across the different digital marketing channels are also addressed. Students learn the latest marketing technology trends affecting Search & Digital Marketing and how to develop an organic SEM strategy to achieve business-focused objectives.

Digital Media for Marketers *(Year 2= 4000 level class)*

Students are introduced to theory and practice relating to digital media and develop a range of practical computing, information and media skills required by digital marketers. The module focuses upon key digital media platforms e.g. websites, social networking sites, social streaming, mobile phones and the use of creative software programs. The course lays foundations in theories, concepts and case studies and provides opportunities for students to apply those principles and case studies to digital marketing.

Finance for Managers I *(Year 2= 4000 level class)*

This course provides future managers with a practical understanding that is genuinely useful in the workplace by covering a range of key financial areas including: how to measure and report the financial position, financial performance and cash flows and how to interpret financial statements. Students learn to understand the nature and role of accounting and finance as well as how to analyse financial statements, create statements and interpret their information.

Innovation Management *(Year 4= 6000 level class)*

In today's fast-moving environment, knowledge management and innovative problem solving techniques are needed within all organizations whether large, small, national or multinational. The aim of this course is to provide students with an understanding of the nature, purpose and practice of innovation management in a context of swift and dynamic change in national and global economies. An introduction into the world of innovation, change management and entrepreneurship and challenge the student to pull together critical concepts of process improvement is covered.

Introduction to Influencer Marketing *(Year 4= 6000 level class)*

Students gain a critical understanding of key elements behind influence and influence culture in traditional and digital media landscape. Students also learn the role of influencers in digital marketing by exploring content creation and production, brand-influencer partnership, and types of creative content. Students are equipped with the management and technical skills necessary to operate in an influencer marketing environment and understand the role of a marketer in managing relationships between brands, Influencers and social media platforms. Students gain insight into identifying influencers for campaigns, managing relations between the influencer and the brand, as well as evaluating influencers.

Introduction to Global Marketing *(Year 4= 6000 level class)*

Students are introduced to the theory and practice of marketing in a global environment. Students gain an understanding of the management capabilities needed in the global marketing decision making process and are provided with the opportunity to explore in depth the conceptual frameworks which influence international & global digital marketing.

Digital Content Copyright & Creativity *(Year 4= 6000 level class)*

This course introduces the concept of engaging with and acquiring customers using the creation and sharing of online content. Students are exposed to the latest techniques for content creation and outreach across all of the

core social networks, giving them practical knowledge of how to create best practice paid and organic digital marketing campaigns. This course equips students with the knowledge and skills to resource a content management function, to target audiences, select appropriate platforms and make use of social listening and competitor analysis.