

FALL 2019 TENTATIVE COURSE OFFERINGS*

The American College of Thessaloniki plans to offer a wide array of courses from the Divisions of Business, Humanities & Social Sciences, and Technology & Science for the Fall 2019 semester. For those students in the Study Abroad Program, prerequisite requirements can be waived if comparable completed coursework at their home institution can be demonstrated.

*Please note that ACT reserves the right to cancel a class due to low enrollment and will work to provide appropriate alternatives for those students impacted by any changes in course offerings.

DIVISION OF BUSINESS

Accounting 101: Financial Accounting

This course is designed to provide students with an understanding of accounting information and the environment in which it is developed and used. Accounting principles and procedures are discussed in order to provide an understanding of the financial accounting process, including the recording, summarizing, and reporting of business transactions, which result in the preparation of financial statements. Topics covered include accounting and the business environment, revenue and cost recognition, asset valuation, depreciation, and an introduction to financial statement analysis. (3 credits)

Accounting 102: Managerial Accounting

This course is designed to give insight into the interpretation and use of financial reports for management planning, coordination and control. Students will be exposed to the kind of accounting information needed, where this information can be obtained, and how this information can be used by managers as they carry out their planning, controlling, and decision-making responsibilities. Topics include management accounting vs. financial accounting, classification and behavior of costs, CVP analysis, segmented reporting, standard costing and responsibility accounting. (3 credits)

Business Administration 240: International Business Law

This course covers the principles of commercial law as they relate to a business organization and its environment. Topics include forms of business organization, the creation of new business ventures, laws relating to international sales, purchasing contracts, international litigation procedures, counter-trade transactions, exclusive distribution agreements, franchising, forfeiting, export trade documentation and procedures, and types of international contracts of sale. (3 credits)

Business Administration 398: Undergraduate Internship in Business

This course aims towards junior or senior students so as to offer them an opportunity to apply their so far gained academic knowledge. This internship is an academic course and credit is awarded due to learning not just for working. The course's main goal is to provide students with an opportunity to gain work experience that will enhance and complement their academic learning. The course requirements are designed to provide a structure that will enable students to make connections between what they learn in the classroom and on the job, to further develop analytical and interpersonal skills, and to practice business writing skills. (3 credits)

Economics 101: Introductory Macroeconomics

An introduction to modern economic analysis and its policy implications. The course centers on the applications of economic theory to national policy problems such as growth, inflation, unemployment, government expenditures and taxation, and the role of money. In addition, it provides a broad introduction to the understanding of the modern national socioeconomic systems in today's globalized economies. (3 credits)

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Economics 102: Introductory Microeconomics

A continuation of the introduction to modern economic analysis concentrating on the factors affecting behavior and decision-making by households, business firms, and institutions operating under a mixed socioeconomic system. It also considers the issues of market failures and introduces basic concepts of international economics. (3 credits)

Finance 201: Financial Management

This course provides a comprehensive introduction to the field of financial management. Emphasis is given to the examination of the processes and the methodology of financial statement analysis that can be applied and used as guidelines in assessing, interpreting and planning financial data to meet the objectives of managing a business entity effectively. Topics covered include goals and functions of financial management, short-term financial management decisions, financial statement analysis, planning and financial forecasting, and time value of money. (3 credits)

Finance 210: Money and Banking

This course is designed to provide an understanding of some key issues related to money, monetary policy, and banking in a domestic and international setting. Major topics covered in the money segment of the course include money creation, the monetary system, policy and control. The banking segment begins with an examination of the main banking operations and functions, and continues with a discussion of the main principles of bank asset and liability management. The markets in which banks operate, including the domestic, international and Euro-currency money and capital markets are then described and the operations of banks in these markets are assessed. The risks encountered in banking are addressed, together with the means of controlling such risks. Finally, the safety and stability of the banking system is considered. (3 credits)

Finance 232: International Finance

This course, designed for students who wish to build upon the basic economic and financial principles they have acquired in the areas of economics and corporate finance, covers both the management and the markets of multinational and European businesses. Students are exposed to the international business environment, with emphasis on the challenges financial managers face in the dynamic and rapidly expanding field of international and European finance. More specifically, students thoroughly examine recent developments in the following areas: financial management of an internationally-oriented business, international financial markets, multinational capital structure and the cost of capital, hedging of exchange rate movements and financing of international trade, and the international banking environment. (3 credits)

Management 101: Introduction to Management

This course provides students with knowledge of basic management theories and concepts and introduces them to simple case studies relevant to the theoretical background that is covered. The subjects examined, including some insights from international management, are the following: the external and internal environment within which an organization operates; the historical foundations of Management; the social responsibility of business and the relation between business and government; the managerial function of planning; management by objectives; the organizing function and organizational structures; the function of staffing and personnel selection; the function of leading, motivation and job satisfaction, and finally, the function of controlling and coordinating a firm's actions to achieve its objectives. (3 credits)

Management 201: Organizational Behavior

The behavior of individuals and groups within the organizational context is presented and analyzed. Different forms of organizational behavior are considered, providing students with exposure to various models. Topics covered include the context of organizational behavior, organizational culture, understanding individual behavior, personality-perception attitudes, job satisfaction, job stress, motivation and learning, interpersonal behavior and dynamics, leadership, power and politics. (3 credits)

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Management 219: International Business

The objective of this course is to present an overview of the global environment within which firms operate. Students are exposed to all aspects of international business and will learn how to interpret international developments and evaluate their consequences for the firm. Among the topics considered are the nature of the multinational corporation, the institutional framework for international business, environmental factors influencing the choice of international investment sites, factors related to business operations in specific countries/regions, and the special circumstances relating to the marketing and financing of international businesses. (3 credits)

Management 312: Operations Management

The course provides an overview of concepts, methodologies and applications of production and operations management. Topics include productivity, forecasting demand, location and capacity planning, inventory control, project management, operations scheduling, just-in-time systems, quality control, total quality management. (3 credits)

Management 322: Business Strategy

The aim of this course is to enable students to approach the whole organization: marketing, finance, accounting and personnel functions together. Strategy and structure are the central themes of the course. Topics covered include the business environment, the systems approach, industry analysis, organizational intelligence, organizational structuring, organizational power, strategy development and implementation, leadership styles, management of the external environment, and strategic decision-making. (3 credits)

Management 323: Business Strategy II (Capstone Project)

This course is designed to synthesize the knowledge and skills developed in previous business courses and apply them to the research project. Students learn about all aspects of the process of developing and carrying out their business strategy research project, and gain an understanding of standards and expectations that students need to meet to be successful in completing their research. Typically there are no classroom sessions throughout the course. However, in order to make substantial progress, it is essential that students set and meet aggressive goals and meet regularly with their coordinator to ensure the research project is progressing in a focused and high quality manner. Lastly this research project should prove the student's independent ability to investigate and develop an issue within the field of business strategy. Prereq: Management 322

Marketing 101: Introduction to Marketing

The objectives of this course are to introduce the basic marketing concepts, to present the practical use of marketing in modern corporations, to provide students with the elements of market thinking in solving business problems and to prepare them for working in the competitive and dynamic field of marketing. Topics covered include the macro and micro role of marketing, market segmentation, basic principles of marketing research, demographic and behavioral dimensions of consumers, marketing mix, product analysis, product strategies, new product development, distribution channels, pricing policies, introduction to promotion and advertising, and marketing plan construction. The course is enriched with supplementary up-to-date articles, real-world cases, video projections, and marketing simulation. (3 credits)

Marketing 200: Principles of Public Relations

The course introduces students to the theories and techniques involved in planning and carrying out appropriate programs in order to influence public opinion and behavior. The students will receive a comprehensive knowledge of Public Relations, public opinion, public practices and problem solving and prevention. (3 credits)

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Marketing 301: Marketing Strategy

An advanced marketing course that offers in-depth examination and analysis of the basic marketing principles gained in Marketing 101: Introduction to marketing. Students are taught what is being confronted in a marketing department and what the alternative procedures for carrying out various marketing projects are. A considerable effort is made to provide students with the elements of marketing thinking in structuring marketing strategies for various corporations. Supporting students' ability to think, express themselves, write, speak and argue in marketing terms also constitutes one of the main course objectives. Finally, students are prepared to work in the competitive and dynamic field of marketing and to become professionals with a global perspective. Case analysis and class discussions of current issues are among the important educational and learning tools used. Prereq: Marketing 101

Marketing 324: E-Marketing

This course focuses on the key marketing issues in E-Business, comparing marketing concepts in the traditional marketing environment with those employed in E-Business. Topics addressed include Marketing Research on the Web, Personalization/Online Community, Pricing Online, Customer Support and Online Quality, E-Commerce, Business to Business (B2B) Marketing, Advertising/Brand Building, Web Promotion, and "Virtual Legality".(3 credits)

Marketing 330: Consumer Behavior

The marketing discipline and marketing activity in theory and in practice should be customer centric and that means consumer centric. The marketing process and theory start with the consumer and end with the consumer. It starts with identifying needs all the way to post purchase satisfaction and loyalty. The purpose of this module is to complement the marketing process with the understanding of how a consumer decides and behaves. Students are expected to understand the factors involved in consumer behavior as well as the process of consumer choices and behaviors in the current social environment. The usefulness of this understanding in terms of marketing application, consumer choice optimization and its implications on society are to be explored. (3 credits)

DIVISION OF HUMANITIES & SOCIAL SCIENCES

Art 120: Art Appreciation: Principles of Design

The purpose of this course is to introduce students to the general principles of design, that is, to the formal elements in any work of visual art (painting, sculpture, photography, film, contemporary installation art, etc.). The course will be thematic and topical, and will consider examples from all periods of Western and non-Western Art. Included in the formal course work will be visits to local museums and galleries to examine firsthand artworks illustrating the different principles studied. (3 credits)

Art History 121 Greek Art and Architecture: Ancient to Modern

This course will provide a compact yet comprehensive chronological study of the arts of Greece from ancient to modern times. The examination of the arts will also allow for a better understanding of the complexities of political, social, and religious over time. Key periods covered include antiquity, the Roman, Early Christian and Byzantine Eras, the Ottoman Occupation, and the establishment of the Modern Greek State. This course is offered on an accelerated timetable for study abroad students. (3 credits)

Communication 127: Communication, Culture & Society

Covering a range of different forms and contexts of communication (interpersonal, group, public, mediated, verbal and non-verbal communication) and using cases and scenarios drawn from everyday life, the course explores the ways communication and culture interrelate and interact, with particular focus on the workings and failures, potentialities and constraints of human communication. (3 credits)

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Communication 327: Communication Research Methods

The aim of the course is to familiarize students with the challenges of conducting research in social sciences and the humanities. It is designed to provide students with research skills which are in high demand in a variety of contemporary professional settings, and necessary for their academic advancement to a graduate degree. Students will learn to collect, organize, analyze and evaluate data, as well as to consider the ethical implications of doing research. This course will discuss various research methods and in each of the methods studied, the aim is to focus on its practical applications and uses, examine in-depth notable cases of published research, and appraise their social utility. (3 credits)

English 101: Composition I

This course reviews the basic principles of paragraph writing and introduces the major rhetorical modes of narration, description and exposition through discussion of theory, examination of model essays, and writing practice. In addition, students are introduced to information literacy by spending seven two-hour sessions in the library, developing effective search strategies, understanding the differences between types of resources, and using critical skills with which to evaluate resources. (3 credits)

English 203: Advanced College English Skills

This course will focus on selection of readings in different disciplines (academic essays, professional articles, technical reports, business cases) and on practicing advanced reading comprehension skills. It will emphasize vocabulary enhancement, critical thinking, and synthesizing of ideas. Students will practice advanced writing skills (writing essays & academic papers with relevant scholarly apparatus, short argumentative reports, critical reviews, professional summary writing, informative reports, comprehension exercises) and oral presentations. (3 credits)

English 220: Introduction to Twentieth Century Poetry and Drama

This course introduces students to twentieth century poetry and drama through the consideration of selected texts from both genres that represent major thematic and stylistic concerns of the period. Students will be able to reflect upon the diverse directions taken by poets and dramatists throughout the century and some of the factors which have influenced literary developments, while critically analysing the components of both genres and their effects. The first part of the course will concentrate upon poetry and examine poetic techniques, structure, language and style and their relationship to meaning; where appropriate tracing similarities and differences in the works studied. In the second part of the course, selected plays will be studied, focusing upon dramatic conventions, structure, language and style, with careful attention being given to the performative aspect of the texts and influences that have helped shape twentieth century theatre practice. (3 credits)

English 230: English Literatures

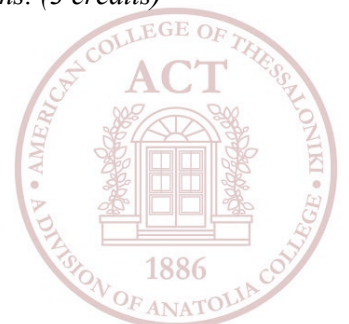
As a study of essentially British literature, the course will analyze contextually the works of seminal writers from the age of Chaucer and on. This course aims to help students explore the interface of literature and society, and to provide them with appropriate tools for more advanced contextualized literary study. Students will learn to contextualize individual texts, recognize literary trends and cultural modes, evaluate literary and social movements, and be able to follow and discuss the evolution of English literatures since the age of Chaucer. To help expose students to literary breadth and textual richness, excerpts of longer texts will be selected. (3 credits)

English 250: Advanced Writing & Professional Communication

The purpose of this course is to provide instruction and practice in the skills and strategies necessary to produce effective written and oral communication in any professional context. The course addresses topics such as persuasive writing techniques, formal professional communication (including executive summaries, legal documentation, letters and reports) as well as intercultural communication, professional writing in the 'e-world' and advanced public communication writing & speaking skills. The course is designed to foster skills development in the areas of critical thinking, presentation techniques, application of accepted professional frameworks to new ideas and use of innovative writing, with the aim of preparing students for realistic professional situations. (3 credits)

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English 390: Senior Thesis I

This is the first part of a course in which the students are required to write an 8,000-word thesis. It forms a fundamental component of the BA Hons English curriculum, serving both its pathways, which offers students the opportunity to cultivate the abilities and skills necessary for the realization of a medium-scale research project, from the formulation of the initial research question to its final submission. Combining what is often encountered as either final year Dissertation or Advanced Research & Writing Skills, the course offers an integrative, hands-on and project-focused approach deemed particularly useful both to a wide variety of professional settings and to the advancement to graduate studies.(OU Level 6)

European Studies 211: The Politics of the European Union

The aim of this course is to introduce students to the major historical, political, and legal developments leading to the creation and evolution of the European Union. The course examines in detail EU treaties, institutions, and policy-making processes, and provides a critical examination of theories of European integration and enlargement. (3 credits)

Greek 101: Beginning Modern Greek I

The aim of this course is to develop students' familiarity with oral and written Greek through dialogues dealing with everyday situations and written material drawn from the popular media. Emphasis is on oral communication. Grammar is learned through dialogues illustrating everyday communication, while students gain practice by role-playing and acting out numerous everyday situations. The vocabulary used meets basic social needs for an environment where Greek is spoken. (3 credits)

History 120: The Modern World

This course takes its point of departure in late eighteenth-century Europe during the period of the Enlightenment and the French Revolution, and concludes in the late twentieth century with the end of the Cold War and the immediate post-Cold War decade. Course materials integrate social, cultural, political, and economic approaches, as well as aspects of historiographical analysis, in order to facilitate study of both the foundations of the contemporary world and questions relating to historical representation. The course also provides coverage of significant global developments in the modern era. (3 credits)

History 232: Thessaloniki: A City and its Inhabitants

Throughout its long history Thessaloniki has been home to many different peoples and cultures. The purpose of this course is to review the history of the city and to focus on the different ethnic communities which have inhabited it, including principally Greeks, Turks, Jews, and Armenians, among others. The course will consider the establishment of the city in Hellenistic times, its Roman and Byzantine periods, the impact of the Ottoman occupation, the coming of the Sephardic Jews, the effects of the Balkan and the two World Wars as well as those of the Holocaust on the city. It will include visits to such important cultural sites as the Archaeological Museum, the Museum of Byzantine culture, the Jewish Museum of Thessaloniki, Roman antiquities and Ottoman buildings. (3 credits)

Humanities 120: Understanding Greek life and culture

The course provides an understanding of contemporary Greek life and what it means to be Greek. It does so by examining the practices and creations of Greek culture, as well as by identifying and understanding the main figures of Greek life and the political scene through time. In addition, it develops students' intercultural and communicative competency so that they can interact both locally in Greece and in the global community. Indicative content areas: Modern Greek language (acquisition of effective Modern Greek communication skills for daily use), Greek culture (language, art, cinema, music and customs), the Modern Greek state structure (background, historical development, public administration, and political parties), figures and Institutions, Greece as pluralistic society (the Orthodox church, family, community and values, migration, minorities), national identity (nation-building, ethnicity, and Greeks within Europe, the Balkans and the world)

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Humanities 209: Topics in Mythology and Religion in the Classical World

The course provides a systematic in-depth study of the major mythological characters, deities and myths of (mostly) the Greeks and the Romans through the use of both primary and secondary source material, visual and literary. The approach will be thematic and we will explore the nature and scope of mythology as well as its relation to religion, history and art. Comparisons with associated mythologies of the ancient Mediterranean world will be in place in order to demonstrate the broader historical and cultural framework. The myths and religion will also be studied in terms of their endurance and relevance in the western world as well as in popular culture. Finally, they will function as a setting for the discussion of matters of spirituality in the contemporary world. (3 credits)

Humanities 210: Religions of the World

This course will expose students to a comparative study of five of the world's main religious traditions, exploring those traditions through their literatures, while focusing also on origins, cultural contexts, histories, beliefs, and practices. Through reading, discussion, and visual appreciation of artistic renditions of religious world-views, students will gain valuable understanding of traditions other than their own, contributing to their broadened and deepened awareness of the world. (3 credits)

Humanities 246: Introduction to American Cultural Studies

This course investigates selected key aspects of America's historical and cultural development from the colonial period of the 17th century to the early 21st century. A wide array of texts, mediums, and genres will be examined to provide the basis for a critical evaluation of the American experience and debates on what constitutes an American identity. Some of the topics addressed include the evolution of colonial society, aspects of political culture, intellectual and literary trends, slavery and the Civil War, the Native Americans, the civil rights movement, America's role in the world, and acknowledging the myriad of "American voices" of which American cultural expression is comprised. (3 credits)

Music 120: Traditional and Contemporary Greek Music

The aim of this module is to provide students with an introduction to the historically rich and varied traditions of Greek music as part of Greek culture, through the ethnomusicological lens. The principal focus will be on folk music, instruments and dance in rural and urban settings, the urban tradition of the rebetika, church music, popular and artistic songs and the contexts of their performance. Music from and in the Greek cinema from the '50s and on will provide valuable images. The module also aims in providing the background for fieldwork experience and a more intimate knowledge of music in Greek society, through the exposition of students to the musical life of the city of Thessaloniki, the events, places, performers, traditional instruments, music shops, and instrument makers. (3 credits)

Philosophy 101: Introduction to Philosophy and Critical Reasoning

The primary aim of this course is to train students in the skills required for critical analysis of discourse. Its secondary aim is to apply these critical analytic skills to the activity of philosophizing. Accordingly, the course is divided into two parts. In the first, the main concern is with the validity of inferences. Students learn sentential and predicate calculus so that they are in a position to check the validity of any argument proposed. In the second part, the main concern is inquiry and to this purpose the students first apply logical theory to methodology (induction, hypothesis, abduction, explanation, reduction theory, definition, distinction, issue, problem), and then apply all these techniques to the discussion of two problems: the existence of God and the problem of mind and its relation to matter. (3 credits)

Politics 101: Contemporary Politics

The purpose of this course is threefold. First, it explores various dimensions of what political scientists call "governance" and what psychologists call "Machiavellian Intelligence," namely those instances in our daily lives where humans, by their very nature, engage in activity one might call "political." Second, the course examines different aspects of the formal, systematic study of political phenomena, commonly known as the academic discipline of political science. Finally, it considers basic elements of negotiation, from simple exchanges with neighbors to formal diplomatic relations in contemporary international relations. (3 credits)

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Politics 232: International Organizations and Institutions

The aim of this course is to introduce students to the basic theories and concepts on international organization and to analyze the role of international organizations in the international legal order. The course begins with the historical development of international organizations, and then introduces the students to the various IR and IL theories on the phenomenon of international institutional cooperation. The course then focuses on the IO's role in the making, implementation and enforcement of international law upon nation-states and individuals, their overall impact in the international order and the question of their accountability. (3 credits)

Politics 304: Women, Power, and Politics

This course provides an examination of the intersection of gender with politics, emphasizing the social construction of gender as well as the notion of citizenship and the part of women within a democratic polity. The course addresses the evolution of public policies affecting both men and women, legal systems and women, and the emerging role of women in state and nonstate political institutions. The course will also explore the challenge that feminist theory has made to the traditional theories of politics and international relations. (3 credits)

Politics 333: Diplomacy and Negotiation

This course considers the overlapping disciplines of diplomacy, negotiation, and conflict resolution. The course begins with an overview of the historical evolution of contemporary diplomatic relations. The students are introduced to different types of international negotiations. The final segment of the course reviews case studies in complex multiparty conflict resolution. Student evaluation will be based in part on participation in a practical simulation. (3 credits)

Psychology 101: Introduction to Psychology

This course aims at providing a comprehensive introduction to the essential principles of the academic discipline of psychology by addressing such important topics as the function of the human brain, perception, language, development, learning, motivation, emotion, intelligence, personality, psychological disorders, and social behavior. The student is introduced to major theories of human behavior and is encouraged to assess critically the contribution and applicability of psychological research to daily life through class discussions, presentations and written assignments. (3 credits)

Sociology 101: Contemporary Society

This course will explore the discipline of sociology, with a particular focus on the key concepts and issues relating to the study of contemporary society and culture. The course seeks to establish a methodological balance between theoretical grounding and an applied framework as it examines the following thematic issues: social and cultural theoretical perspectives, globalization, power, ethnicity, gender, the mass media, and the dynamics of culture in the contemporary world. (3 credits)

Social Science 210: Introduction to Global Studies and Human Geographies (formerly History 210)

This course sets out to explore a number of subjects relating to the study of geography and politics. Students will be exposed to topics such as world/regional geography, cartography, geopolitics, politics and the environment, colonial/postcolonial geographies, and development, while the multidimensional and trans-disciplinary nature of geographical and political studies will be emphasized throughout. The course will also investigate such topics as world systems theory, cultural change, and globalizations. (3 credits)



Social Science 349: Contemporary Globalization

This course aims to give the students a complex understanding of the processes of globalization. We will first look at how different theoretical perspectives make sense of globalization, i.e., what it is, whether it is a novel set of phenomena or not, and what its impact is on our world. With the background of this theoretical diversity, we will then go into studying in depth the institutions and impact of globalization. We will explore how globalization shapes and alters the economic, political and social structures of societies, and what specific roles the global institutions play in this transformation. We will also look at the gender dimension of this claim. Finally we will discuss those political movements which criticize and provide alternatives to globalization. (3 credits)

Social Science 399: Service Learning Practicum

The course comprises a combination of theoretical sessions (in-class component) and real-life case study projects. Having a service-learning character, this course enables students to experience in practice and better understand community engagement through placements and implementation of projects in local community NGOs, agencies and organizations. Some identified organizations for students' placements are organizations that provide services related to health and care, education, environment conservation and citizenship & social activism. The key principle underlying these activities is the co-construction of knowledge through student collaboration. Such a participatory approach facilitates the process of pairing up students across ages, backgrounds and interests and enables a shared, co-experienced understanding of place and community participation among the young people involved. (3 credits)

DIVISION OF TECHNOLOGY & SCIENCE

Anatomy and Physiology 115: Integrated Human Anatomy and Physiology I

This course is the first part of a two-part Anatomy & Physiology Course. It is designed to provide an understanding of the anatomical structures, function and regulation of integumentary, muscular, skeletal, nervous and endocrine systems. This course aims to provide students with knowledge of normal function of the organ systems and thereby provide the information base for interpreting data relating to health and disease. For those in health fields, this information will serve as the foundation for most of your courses. (4 credits)

Biology 112: Principles of Biology

The goal of this course is provide first-year college students with a firm grasp of the major concepts underlying biological processes. Students who are interested in careers in biological sciences, biomedical sciences, and biotechnology should find that the course provides strong foundations on an understanding of the concepts that will serve them well in their academic track that lies ahead. The materials covered include the structural and functional aspects at the molecular and cellular level of the following: cell structure and function, cell organelles, cellular reproduction, cellular respiration, photosynthetic pathways, Mendelian inheritance, DNA structure, replication, gene structure, and gene function and expression/control. Lectures, practical work, class discussions, presentations, and directed study are used for teaching the course. (4 credits)

Chemistry 115: Chemistry for the Applied Sciences

This course aims to introduce students to the fundamental principles of chemistry and their applications. Much of the language and fundamental skills of a chemist is applicable to other scientific fields. Students develop, deepen, and broaden their understanding of connections between the underlying structure of matter and the nature of energy. The course will cover the atomic and molecular structure, the naming of ionic and molecular compounds, the description of the behavior and reactivity of these compounds, the application of stoichiometric relationships, and the prediction of the behavior of gases. In addition, you will get to explore and review the role of work and heat flow in chemical systems, the quantum theory, the electronic structure of atoms, the attractive forces holding the atoms together and influencing their physical properties, and the VSEPR Theory and molecular geometry. (4 credits)

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Computer Science 101: Introduction to Computing

The course aims at making the student an effective computer user within the contemporary networked environment of both the office and the Internet. Students learn the usage of modern programs suitable for composition, calculation and presentation, as well as the facilities available for communicating and researching through the Internet. The fundamentals of how the computer and a network of computers work are discussed in order to provide a basic understanding of the modern computing environment. (3 credits)

Computer Science 105: Introduction to Programming I

The course starts by exposing students to modern Information Systems and the basics of Information Technology, as well as practical exercises on the usage of a computer in the modern, networked environment. Subsequently students are introduced to a modern programming language and are taught the basic elements of programming. Programming topics include data types, operations, objects, and an introduction to structured programming. (3 credits)

Computer Science 151: Quantitative Computing

This course aims at increasing students' quantitative skills through extensive usage of popular spreadsheet programs. Students will be exposed to numerous basic concepts of computing, including data types and formats, spreadsheet programming and data structures. A variety of problem solving tasks will be presented at an introductory level, including data analysis, simple system modeling and simulation. Applications will be drawn from several disciplines, including business. (3 credits)

Computer Science 180: Discrete Structures

This course introduces the mathematical structures and methods that form the foundation of computer science. The material will be motivated by applications from computer science and emphasize:

- *Techniques: binary and modular arithmetic, set notation, methods of counting, evaluating sums, solving recurrences, ...*
- *Supporting Theory: basics of probability, proof by induction, growth of functions, and analysis techniques and*
- *General problem solving techniques with many applications to real problems.*

The course material is divided into five modules. Each module starts with a motivating application then goes into techniques related to that application and the theory behind those techniques. Each module ends with one or more fairly deep applications based on the material.

These modules are: Computers and Computing: Numbers, Circuits, and Logic; Cryptography: Integers and Modular Arithmetic; Combinatorics: Sets, Counting, and Probability; Algorithmic Analysis: Searching and Sorting; Networks: Graphs and Trees (3 credits)

Computer Science 205: Business Data Management

This course deals with numerous forms of business data employed in monitoring business operations, and covers table design and handling data using a popular database program. Topics include Business Data Modeling and Design, Activities Monitoring, Data Analysis, and Company Assessment. This course, based on Relational Data Modeling, teaches students how to build small business applications with tools for managing Relational Databases. (3 credits)

Computer Science 215: Data Structures

The purpose of CS215 is to introduce students to the main concepts and implementation principles of object-oriented programming and data structures, using Java as the programming language. This course builds on the knowledge and skills acquired in CS105 – Introduction to Programming I. The course is split in two parts; the first part deals with object-oriented programming using Java, re-enforcing the fundamental concepts learned in CS105. The second part of the course introduces data structures. The data structures examined include arrays, lists, queues, stacks, trees, heaps, hash tables and graphs. Searching, sorting, inserting, deleting and other simple operations on these structures will also be discussed. (3 credits)

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Computer Science 300: Mobile Application Programming

This course focuses on the fundamentals of mobile strategy and development, application architecture and design. Students will have the opportunity to learn the benefits and challenges of mobile application planning, design, development and strategy through real world examples and actual project work. Through readings, discussions, research, and practical "hands-on" projects, students will better understand the current market for mobile applications and develop the fundamental skills necessary to enter the mobile application industry. This course aims to teach how to build cross-platform mobile solutions to solve complex problems using iOS and Android phones and tablets. The course will teach students how to develop software for iOS and Android mobile devices through real world examples and strategies. Students will be guided through a complete mobile development lifecycle during the semester, and be given the opportunity to develop a series of applications. (3 credits)

Computer Science 306: Advanced Web Development

This course builds on the skills and knowledge about creating and publishing Web pages and sites taught in CS 206. It also introduces students to advanced Web development areas, required for students interested in pursuing a career in web site design. Material to be covered includes Advanced Web Design and Animation features, Web site management, Browser Issues, Cascading Style Sheets (CSS), applying the Common Gateway Interface (CGI), dynamic HTML, and emerging Web standards. (3 credits)

Computer Science 321: Operating Systems

This course deepens understanding of how contemporary computing systems are structured and, in particular, supported by an Operating System. It is a culmination course within the Computing Systems programming thread. Operating Systems are the brain of any computing system. They handle the body/DNA (hardware) as well as behavior (usage of system by user). Following rapid to revolutionary technological developments the field of Operating Systems also undergoes tremendous changes, which constantly evolve the conception of an OS and of course the technological challenges involved in its implementation. The course aims at outlining the role of an OS in a diachronic way while comparing and contrasting design choices spanning the evolution of the field. It aims at defining fundamental needs that a von Neumann machine has from the Operating System in order to be functional, optimal and attractive to the user. The course explains Operating Systems architecture and examines trade-offs involved in different, evolving systems. It further examines diachronic as well as contemporary issues involved in Operating System design by comparing and contrasting relevant design and algorithmic choices. The course involves lab work: Communication with the OS at a low level via a Linux shell and programming tasks addressing aspects of Operating System design and implementation. (3 credits)

Computer Science 325: Distributed Applications

The purpose of the course is to examine in detail the software and hardware technologies prevalent in the Internet and provide an introduction to the principles and methods for creating distributed on-line client/server applications that are the basis for electronic commerce as it is conducted over the Internet. Methods and tools such as HTML, the Common Gateway Interface, PHP, database connectivity tools and MySQL are presented. Coverage is also given to emerging standards for information exchange, encryption and validation. (3 credits)



Computer Science 412: Object Oriented Programming

The course revisits Object Oriented application development methodology at the Senior level, examining its effectiveness in the life cycle of professional applications and software reuse through the adoption of Object Oriented Design Patterns. It presupposes the knowledge earned through the introductory line of the Programming Fundamentals programme thread and follows level 5 modules relating to Data Modelling (CS 312) and Systems Design (CS450) while specialising them within the context of Web Development. Currently CSC 325 (Distributed Systems) is a necessary prerequisite concerning web deployment technologies. The module mostly emphasizes the employment of OO concepts to Web Development yet it is of general enough nature for a level 6 module as the design patterns examined are applicable to a wide range of technologies and application domains. (3 credits)

Computer Science 443: Capstone Project I

This is a set of linked courses (CSC 443-444) to be taken in sequence over the course of the senior year. The course aims to give students the opportunity to work in a guided but independent fashion to explore a substantial problem in depth, making practical use of principles, techniques and methodologies acquired elsewhere in the program of studies. It also aims to give experience of carrying out a large piece of individual work and in producing a final project report. It has two distinct phases: the preparatory phase focusing on literature review, assessment of Technologies and Project Specification and the implementation phase focusing on project design, development, documentation and presentation. This course places an emphasis on the role of functions (coordinate systems, properties, graphs and applications of polynomial, rational, logarithmic and exponential functions), solving systems of linear equations, matrix operations, mathematics of finance, and introductory counting techniques. (3 credits)

Ecology 110: Ecological Principles

The goal of the course is to introduce students to general ecology. It focuses on major ecological concepts in order to provide students with a robust framework of the discipline upon which they can build. Each discussion is organized around two or four major concepts to present the student with a manageable and memorable synthesis of the lecture and it is supported by case histories that provide evidence for the concept and introduce students to the research approaches used in the various areas of ecology. Special emphasis to local environmental problems countries face. (4 credits)

Mathematics 101: Elements of Finite Mathematics

This course places an emphasis on the role of functions (coordinate systems, properties, graphs and applications of polynomial, rational, logarithmic and exponential functions), solving systems of linear equations, matrix operations, mathematics of finance, and introductory counting techniques. (3 credits)

Mathematics 115: Calculus

This course covers: rate of change and introduction of the derivative for functions of one variable; applications of the derivative to graphing one-variable functions and to optimization problems; introduction of functions of several variables and partial derivatives; problems of unconstrained and constrained multivariable optimization; applications of differential equations; integration of functions of one variable and applications, and advanced methods of optimization. Emphasis is placed on applications and problem solving through conventional and computer methods. (3 credits)

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Mathematics 120: Calculus I

This course provides a solid foundation in Calculus concepts, tools and techniques for the student entering Science and Engineering fields. The course covers definition, calculation, and major uses of the derivative, as well as an introduction to integration. Topics include limits; the derivative as a limit; rules for differentiation; and formulas for the derivatives of algebraic, trigonometric, and exponential/logarithmic functions. Also discusses applications of derivatives to motion, density, optimization, linear approximations, and related rates. Topics on integration include the definition of the integral as a limit of sums, anti-differentiation, the fundamental theorem of calculus, and integration by substitution and Integration by parts techniques. The course emphasizes conceptualization, modeling, and skills. (3 credits)

Mathematics 121: Calculus II for Science and Engineering

The purpose of this course is to give a solid foundation in Calculus concepts, tools and techniques for the student entering Science and Engineering fields. This course is a continuation to Calculus I for Science and Engineering where the student mastered: Limits, Differentiation, Anti-Differentiation and Basic Integration skills of 2D functions as well as basic introduction to parameterized curves and motion. This course will cover: Techniques and Applications of Integration. Topics will include: Integration by Parts; Integration by Partial Fractions; Trigonometric Integration; Numerical Integration; Improper Integrals; and Areas, Volumes, Mass/Moments and Work as Integrals; Infinite Series and Introduction to Vectors. Other topics addressed are: Convergence of Sequences and Series of numbers, Power Series representations and Approximations of Functions, 3D Coordinates, Parameterizations, Vectors, Dot and Cross Products, Equations of Lines and Planes. (3 credits)

Sea Sail 101: Introduction to Sea Sailing

The aim of this course is to provide the basic yachting skills so that successful students will be safety conscious, have a basic knowledge of sailing and be capable of taking a yacht out without an Instructor on board in light to medium winds in protected waters. The course has both theoretical (In-Class) and practical (On-Board) components; with the latter being the largest part of the course. (3 credits)

Statistics 201: Statistics with Software

This module is an introduction to descriptive and inferential statistical methods. This introductory module covers the concepts and techniques concerning exploratory data collection and analysis, basic frequency distributions, correlation, central tendency and variation, basic probability principles, sampling distribution and statistical inference. Students will be exposed to these topics and will examine how each applies to and can be used in real life applications. Students will master problem solving using both manual computations and statistical software. (3 credits)

Statistics 205: Statistics I

This course introduces students to basic statistical concepts and techniques. Each technique is illustrated by examples, which help students to understand not only how the statistical techniques are used, but also why decision-makers need to use them. Topics covered include Frequency Distributions, Statistical Descriptions, introduction to Probability Theory, Discrete Probability Distributions, Continuous Probability Distributions, Sampling and Sampling Distributions. Emphasis is given to problem solving with the use of statistical software. (3 credits)

