

## FALL 2009 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 '09 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.*

#### **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.*

#### **Business Administration 240: Principles of Commercial 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.*

#### **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.*

#### **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.*

#### **Economics/Management 242: Applied Managerial Economics**

*This course deals with the application of economic theory and the tools of analysis of decision science to examine how an organization can achieve its aims most efficiently. The course uses the theory of the firm to integrate and link economic theory (microeconomics and macroeconomics), decision sciences (mathematical economics and econometrics), and the functional areas of business (accounting, finance, marketing, personnel or human resource management, and production) and shows how all of these topics are crucial components of managerial decision-making. Emphasis is placed on actual real world managerial decisions*

**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*

**Finance 202: Corporate Finance**

*The goal of this course is to provide an understanding of various concepts, theories, practices and techniques of corporate finance. In particular the course aims to provide each student with an understanding of risk and required rates of return, an examination of the valuation of bonds and stocks, a complete treatment of the concepts of investment appraisal and the problems of applying the theory in practice, an examination of the capital structure decision and the cost of capital, and an introduction to long-term financing and capital markets*

**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.*

**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*

**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.*

**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.*

**Management 210: Human Resource Management**

*Theoretical concepts and principles that relate to the management of the human resources of an organization are presented. The main objective is to give students an in-depth understanding of the personnel management function. Topics covered include human resource planning, demand and supply for human resources, job analysis and design, recruitment, selection, training and development of human resources, performance appraisal, compensation systems, employee benefits and services, security and health issues, employee motivation, personnel communication, labor unions, and collective bargaining.*

**Management 218: 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.*

**Management 230: Small Business**

*This course addresses the essential aspects of operating a small to medium-sized company. All major areas of management will be covered with emphasis on their practical application to the Greek business environment. Topics covered include entrepreneurship, new venture feasibility, starting a small business, forms of ownership, strategic planning, marketing concepts and accounting principles for the small business, risk-taking, human resource management and international opportunities.*

**Management /Economics 242: Applied Managerial Economics**

*This course deals with the application of economic theory and the tools of analysis of decision science to examine how an organization can achieve its aims most efficiently. The course uses the theory of the firm to integrate and link economic theory (microeconomics and macroeconomics), decision sciences (mathematical economics and econometrics), and the functional areas of business (accounting, finance, marketing, personnel or human resource management, and production) and shows how all of these topics are crucial components of managerial decision-making. Emphasis is placed on actual real world managerial decisions.*

**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.*

**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.*

**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*

**Marketing 214: Advertising**

*The primary objective of this course is to introduce students to the challenging world of advertising and promotion. Advertising is examined as a distinctive element of promotion, together with other communication tools. Current developments of advertising are discussed and an integrative perspective is adopted, due to rapid changes and metamorphoses in the advertising business. Emphasis is given to the role of modern marketing communications, the organizational needs and structure in the field of advertising and promotion, determining advertising objectives and budget, creative strategy, media planning, analysis of broadcast and print media, types of support media and other promotional tools. The large number of advertising techniques and applications, as well as students' everyday exposure to thousands of communication messages, recommend the use of cases, projects, real-world examples and class discussions.*

**Marketing/Computer Science 250: E-commerce**

*This course provides students with a broad understanding of the electronic commerce domain. It introduces aspects of e-commerce, and students gain insight into technical, business, legal and policy issues. On completion of the course business students will be able to understand what e-commerce is and how to exploit an e-commerce strategy in an organization. Students will be ready to comprehend the e-commerce domain and apply it technically.*

**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.

**Marketing 311: Retailing**

This course provides an examination and analysis of a vital marketing distribution channel. Basic issues regarding retailing, and all major aspects of decision-making in retail businesses are covered, including types of retail businesses, consumer behavior, external environments, location decisions, store design and layout, merchandising, human resource management, pricing decisions, financial considerations, promotion, organizational and managerial aspects of operation, and marketing research applications.

**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".

**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.

**Music 120: Traditional and Contemporary Greek Music**

This course will provide students with an introduction to the historically rich and varied traditions in Greek music. The principal focus will be on church music, folkloric song and dance, and contemporary variations of "lay" music. Discussion will also refer to the place of music in ancient Greek society. Knowledge of Greek is helpful but not required

**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.

**English 102: Composition II**

This course builds upon the expository writing skills presented in Eng 101. First, it introduces students to the mode of argumentation by analyzing various types of arguments and presenting the essential tactics used in definition, cause, evaluation, refutation and proposal. At the same time, it introduces students to research paper writing by guiding them step-by-step in the process of forming an argumentative thesis, incorporating sources together with their own thinking into papers, and documenting sources.

**English 120: Introduction to Literature**

This course introduces students to the literary genres of fiction, poetry, and drama, and to the critical concepts and problems involved in the interpretation of literature. Through analysis of a selection of classic literary texts, the course aims to stimulate in students a critical appreciation for literature and a demonstration of the relevancy of literature to life

**English 201: Communication Techniques**

This course covers such advanced communications techniques as topic selection, audience analysis, choice of register, delivery, use of audio-visual aids, and non-verbal communication. Students are introduced to interviewing, reporting, collaborative decision-making and negotiation, various forms of public speaking, promotion and advocacy, and debating, with special emphasis on professional presentation skills. The course also provides practice in various styles of professional writing, such as technical reports, executive summaries, specialized memos, situational business letters, and so on.

**English 203: Reading and Writing in the Disciplines**

*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.*

**English 268: Women and Literature**

*The course will focus on 19th and 20th century English-speaking women writers. Through a study of a selection of literary and critical texts written by women, the course will attempt to answer the question "what does it mean to be a woman writer" by examining recurrent issues such as production, oppression, representation, sexuality, desire, violence and identity, and the way these manifest themselves in women's writing. Such a study of sexual politics will be conducted within the context of a given period and will take into account readership profiles and female character depictions.*

**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.*

**European Studies 341: European Integration and Transatlantic Institutions**

*Thus purpose of this seminar is to link European integration with the larger issue of transatlantic institutions. The parallel histories of such institutions as the Council of Europe and NATO will be examined, and bi- and multi-lateral relations among European and North American states will be studied. An effort will be made to locate the uniqueness of EU integration against this larger canvas of tradition and innovation.*

**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.*

**Greek 104: Beginning Modern Greek II**

*This course is designed to develop further students' fluency in Greek. Emphasis is given to oral practice, which includes active use of the spoken language, without neglecting the written language. Grammar is presented through dialogues from everyday situations and written material from newspapers and magazines. Students engage in discussions on common social topics.*

**Greek 201: Intermediate Modern Greek I**

*In this course emphasis will be given to oral practice, provided through both classroom discussion and presentations. More advanced grammar is taught using textbook dialogues and written materials from a variety of sources, including newspapers, magazines, books, and contemporary song lyrics.*

**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.*

**History 201: Women in Modern Times**

*An upper-level survey which studies the evolving conditions in which women have lived and worked in the western world from ca. 1750 to the present. A variety of types of evidence, from legal documents to art and literature, will be examined. Students will also be introduced to contemporary theoretical developments in the larger field of women's studies.*

### **History 210: World and Human Geographies**

*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/post-colonial 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 globalisation.*

### **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.*

### **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.*

### **Philosophy 203: Ethics**

*This course is designed to help students develop their critical abilities through the analysis of ethical problems and to introduce them to contemporary ethical theory. Following an introduction to the structure of ethical problems, three classical approaches to the problem of justification are presented: moral obligation (Kant), the consequences of one's actions (Utilitarianism), and personal virtue (Aristotle), respectively. The course also includes discussions of meta-ethical issues concerning the relation between fact and value and the problem of justifying and then generalizing one's ethical judgments including the issue of moral relativism.*

### **Philosophy/Computer Science 235: Artificial Intelligence**

*This introduction to the subject of Artificial Intelligence (AI) will have as its central subject the question "Can machines think?" The course considers the history of "thinking machines" and the current state of the art. Typical cognitive tasks performed by machines involve visual perception and recognition, understanding language and translation, diagnosing a patient, and playing games such as chess. The course asks at what point we may say that machines are intelligent (Turing Test); what is computation, what is computable, and what is decidable (Church-Turing Thesis); whether thought is simply a kind of computation and the human mind a kind of computer (Classical symbol-manipulating AI vs. connectionism/neural networks); whether there are aspects of human intelligence that cannot be transformed into algorithms; and the relation between AI and the building of robots and other "autonomous agents."*

### **Politics 101: Contemporary Politics**

*Politics is one of the richest fields of human inquiry, made all the more essential in that just about everything we do in this life can be interpreted to have a political sense. The purpose of this course is to help students discard the negative baggage they carry with them instinctively about politics in order to examine somewhat more objectively the main issues and branches of the academic discipline commonly called political science. Among the topics studied are: political power, authority, and legitimacy; sovereignty and the state; justice; the role of political institutions and political groups; political ideologies and vocabularies; and actors and issues in contemporary international relations.*

### **Politics 221: The Balkans in Contemporary International Relations**

*This course starts by outlining the long-term historical evolution of the region of Southeast Europe in international relations, with a particular focus on the nineteenth century and the formation of modern nation-states, and on the two world wars and their consequences in the twentieth century. The course then shifts to the post-Cold War period, taking into account global, regional, national, and local perspectives on contemporary international relations issues. Special consideration will be given to the role being played in the Balkans by the United Nations and different European organizations and institutions on the one hand, and to the concomitant foreign policies of the concerned Balkan states on the other. The course concludes with an examination of the most pressing challenges facing these states and of the prospects for regional cooperation and peace in the twenty-first century*

**Anthropology 101: Introduction to Anthropology**

*This course provides an overview of major themes and concepts of Anthropology considered both in relation to the biological disciplines (Paleontology, Ethnology, Sociobiology) and as the comparative study of human cultures (Social Anthropology/Ethnology). The course establishes the continuity of human culture from an evolutionary perspective and acquaints students with contemporary interdisciplinary debates on major issues.*

**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.*

**Sociology 201: Contemporary Social Issues**

*This course initiates students into the conceptual framework and problems associated with "mass culture," through an analysis of that phenomenon. The course focuses on the analysis and interpretation of such contemporary social issues as feminism, race and ethnic relations (including internal colonialism), terrorism, and the more specialized cases of institutionalized and clandestine violence. The course maintains a comparative perspective and, thus, the above issues will be considered both in their first and third world contexts.*

**Social Science 219: Individual and Society**

*This course introduces students to the theoretical and practical problems of social interaction in modern society. Contemporary social thinkers and studies will be used in order to explore and explicate the reciprocal relationship between society and the individual. Topics of contemporary interest, among them those of gender, social identity, deviance, and the mass media, are critically analyzed and interpreted.*

**DIVISION OF TECHNOLOGY & SCIENCE****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.*

**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.*

**Computer Science 107: Multimedia I**

*This course is an introduction to digital multimedia. All media components (digital pictures/graphics, text, animation, sound and digital video) are introduced and their parameters defined and studied. Software multimedia development tools necessary for the creation or capture of digital media are presented, and students acquire hands-on experience with a package for each media category. Hardware essential for the capture/creation of the media is also presented. Multimedia project design parameters are examined and applied to a student capstone project.*

**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.*

**Computer Science 201: Business Computing**

*The course aims at presenting Business majors with the basic computing structures needed to support a company's management. Students will be exposed to data tables from a variety of business activities as well as the database techniques necessary to model and effectively process these data for the purposes of company assessment and planning. Examples of applications residing in the WWW will be presented, analyzed and subsequently implemented by students with the database medium used in the course.*

**Computer Science 206: Web Development**

*This course is designed for students who have a good knowledge of computer systems and familiarity with the World Wide Web. It provides an introduction to development for the Internet. The course involves the creation of both static and dynamic or interactive web pages using a range of tools from basic text editors, through HTML specific tools as well as a web development tool. Topics covered include Web page design issues, basic understanding of Web authoring and site management, HTML, Web development using specialized tools, and fundamentals of animation software.*

**Computer Science/Philosophy 235: Artificial Intelligence**

*This introduction to the subject of Artificial Intelligence (AI) will have as its central subject the question "Can machines think?" The course considers the history of "thinking machines" and the current state of the art. Typical cognitive tasks performed by machines involve visual perception and recognition, understanding language and translation, diagnosing a patient, and playing games such as chess. The course asks at what point we may say that machines are intelligent (Turing Test); what is computation, what is computable, and what is decidable (Church-Turing Thesis); whether thought is simply a kind of computation and the human mind a kind of computer (Classical symbol-manipulating AI vs. connectionism/neural networks); whether there are aspects of human intelligence that cannot be transformed into algorithms; and the relation between AI and the building of robots and other "autonomous agents."*

**Computer Science/Marketing 250: E-commerce**

*This course provides students with a broad understanding of the electronic commerce domain. It introduces aspects of e-commerce, and students gain insight into technical, business, legal and policy issues. On completion of the course business students will be able to understand what e-commerce is and how to exploit an e-commerce strategy in an organization. Students will be ready to comprehend the e-commerce domain and apply it technically.*

**Computer Science 321: Operating Systems**

*This course introduces students to the principles of operating system design and to the prevailing techniques for their implementation. Three concrete examples of operating systems are used to illustrate how principles and techniques are deployed in practice. The major topics covered are: Processes: Purpose of the OS, Entities and Functions, Process Management, Creation / Scheduling / Termination, Communication/Synchronization, The OS Kernel. Memory Systems: Hierarchical Organization, Contiguous storage allocation, Single- and multi- programming, Static and Dynamic partitioning, Segmentation, Paging. File Systems: Directory organization, File types and file organization, Consistency and efficiency (e.g. in a network). Case Studies: Windows, Linux, Unix.*

**Computer Science 322: Network Operating Systems and Administration**

*This course combines theory of operating systems and networks and their application to modern network management. Topics include multitasking, network file systems, client-server architectures, concurrency, and network administration.*

**Computer Science 451: Management Information Systems**

*This course introduces students to the role of management information systems in the context of the modern business organization. The role of information systems specialists is also introduced and differentiated from that of the organization's management. Using an approach to business problem solving using information systems, students will be introduced to the role of MIS in everyday operations and transactions and the way modern MIS redesign operational procedures. The role of the central database system is highlighted and the role of computer networks and communication systems in the global dispersion of business operations is also introduced. The course continues with the role of MIS in decision-making and examines decision support systems and expert systems. Students are also introduced to artificial intelligence and its role in MIS. The course concludes with the role of MIS in strategic decisions by top management and the ways in which competitive advantage can be achieved through the use of various information systems.*

**Mathematics 100: Mathematics for Decision-Making**

*An introduction to selected areas of mathematics in familiar settings with the objective of developing students' conceptual and problem solving skills. The course includes a study of mathematical concepts selected from graph theory, planning and scheduling techniques, statistics, probability, game theory, growth patterns, coding information, voting systems and apportionment.*

**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.*

**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*

**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.*

**Biology 101: Introduction to Biology**

*This course introduces the basic principles of modern biology, the framework within which new discoveries are interpreted and the relations among various branches of biological research. Emphasis is given to mammalian - particularly to human - biology, the genetic revolution, the eukaryotic cell, and multicellular systems. Laboratory included.*

**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 and the approaches they use in solving these problems. Laboratory included.*