Semester of odd-numbered years. 3 hours Lecture and 3 hours Laboratory — 4 credits

Specialized Methods and Techniques
Each major department offers a series of courses designed to acquaint the student with various applications of the professional specialty. In the Biology program this requirement is fulfilled by satisfactory completion of one of the following Biology electives: BY 2001 Botany; BY 2223 Comparative Anatomy; BY 2004 Genetics Laboratory.

Employment Program
BY 2370
Employment Program
Each student in Biology is required to spend 500 hours in approved jobs related to the student’s major. Registration for the Employment Program must occur prior to the beginning of the relevant experience. Registration materials are available from the Office of Career and Life Education, located in Segal Hall. 24 weeks of On-the-Job-Training — 4 credits

Biotechnology (BT)

BT 3000
Introduction to Biotechnology
An interdisciplinary course designed to provide increased familiarity with the concepts, objectives, techniques, ethical and regulatory considerations in the developing areas of biotechnology. Topics include molecular genetics, bacteria, viruses, and applications in biological, medical, food, plant and animal sciences. Prerequisites: Biology II, or Biological Science II, and Biochemistry. Meets the requirements for certification in education, General Science and Biology minors. Does not substitute for Molecular Biology. Offered in Fall Semester. 3 hours Lecture and Discussion — 3 credits

BT 3001
Introduction to Biotechnology Laboratory
This is a one credit laboratory course offered in conjunction with BT 3000. Laboratory sessions provide students with hands-on experiences with commonly used methods and procedures in biotechnology. This experience is designed to improve employment opportunities for the students and to enhance their understanding of the lecture material. Prerequisites: BT 3000 Introduction to Biotechnology taken previously or concurrently. Spring semester. 3 hours Laboratory — 1 credit

BUSINESS ADMINISTRATION (BA)

BA 1005
Introduction to Business
This course is designed to give the student a basic overview of the organization and management of the enterprise. The course includes a study of the characteristics of economic systems; the nature and functions of management; and the basic organizational functions of finance, marketing, operations, and human resources. 3 hours Lecture and Discussion — 3 credits

BA 1009
Management Concepts
An introductory course in the study of business management and the various managerial skills necessary to make the decision-making process work. The course will focus on the different aspects of the business environment and concentration on the basic skills required of managers. 3 hours Lecture and Discussion — 3 credits

BA 2008
Macroeconomics
Course provides students with a background to understand the nature, forces, behaviors and institutions that compromise the US economic system. The student is introduced to economic thinking, concepts, principles, laws and models found in the field of macroeconomics. Students explore macroeconomics through topics and their related issues. Some topics studied are: economic systems, market system, demand and supply, functions of private and public sectors in the US economy, National Income Accounting, Business Cycle: unemployment, inflation, and growth, Employment Theory, Fiscal Policy, money and banking and monetorism. 3 hours Lecture and Discussion — 3 credits

BA 2017
Principles of Marketing
Management of the marketing functions, including marketing research, product planning, distribution channels, pricing, promotion, personal selling and advertising. New techniques and trends in marketing, as well as governmental rules and regulations will be examined. Emphasis is on consumer and industrial markets. Prerequisite: Junior Status. 3 hours Lecture and Discussion — 3 credits
BA 2123, 2224
*Principles of Accounting I and II*
These two courses in principles of accounting present accounting principles and practices at the basic level. Sole proprietorship, the accounting cycle, journals, internal control, receivables, inventories, vouchers, depreciation and financial statements are among the topics covered in the first part. To emphasize the role of accounting in decision making a practice set is included in Accounting I. For Accounting II, corporations, partnerships, cost accounting, budgeting, statement analysis, fund flow analysis, and taxes are among the topics covered. Students review business financial statements and analyze reports. Ethics – the professional standards of conduct are emphasized in both courses. The importance of proper ethical conduct by all businessmen and women, in particular accountants, makes the business system work. The introduction of International Accounting Standards is discussed. Prerequisite: Principles of Accounting I is a prerequisite for Principles of Accounting II. 3 hours Lecture and Discussion each — 3 credits each

BA 2161, 2261
*Business Law I and II*
The first course introduces the student to the legal and social environment of business, contracts, personal property and bailments, sales and personal property. The second course stresses commercial paper, debtor – creditor relations, risk management, agency and employment, legal forms of business organization, real property and estates. Prerequisite: Business Law I is a prerequisite for Business Law II, or permission of the instructor. 3 hours Lecture and Discussion each — 3 credits each

BA 2210
*Microeconomics*
The emphasis of this course is on understanding decisions that individuals and business’s make in the modern economy. An analysis of different market structures is explored using such tools as economic cost and profit, and marginal analysis. Additionally, a detailed look at the government’s interactive role with the economy is explored. 3 hours Lecture and Discussion — 3 credits

BA 2225
*Accounting Fundamentals*
This course presents accounting fundamentals at the basic level. It is designed to meet the needs of non-business majors who require an understanding of accounting practices. Topics covered include the accounting cycle, journals, receivables, inventories, depreciation and financial statements. Discussions will also introduce partnerships and corporations. One of the objectives of this course is to provide the “Big Picture” while meeting the objective of a first course in accounting identified by the Accounting Education Change Commission. The importance of ethical conduct is discussed and problems are included to have students make judgments of ethical conduct. This course is not available to students in the Business Administration Department. 3 hours Lecture and Discussion — 3 credits

BA 3008
*Organizational Theory and Development*
Advanced in-depth study of the theories, developments and designs of organization. The affects of the internal and external environments on the organization, its systems and the manner in which it conducts its business are explained, as in the continual evolution of its structure. Prerequisite: Introduction to Business and Junior Status. 3 hours Lecture and Discussion — 3 credits

BA 3016
*Consumer Behavior*
A study of the components that influence the consumer decision-making process including an analysis of the marketing process based on an approach that considers the economic, psychological and sociological aspects of consumer behavior. Prerequisite: Principles of Marketing and Junior Status. 3 hours Lecture — 3 credits

BA 3020
*History of Sports*
This course identifies key historical figures in the history of American sports. It recognizes the diversity of American cultural motivations and social interests and how they connect to the development of recreational activities. It also identifies and describes changes leading to the development of modern professional sports. 3 hours Lecture and Discussion — 3 credits

BA 3023
*E-Commerce*
This course explores contemporary issues of E-Commerce/Business to Business, and also instructs students on the use of web development tools. This course is a balance between business concepts and computer applications. Prerequisites: Introduction to Computers, Microcomputer Applications and Junior status. 3 hours Lecture — 3 credits
Course Descriptions

BA 3027  
**Human Resource Management**  
This course is a study of the environment of the human resource (personnel) function, its legal aspects, planning and recruiting, training and career development, compensation systems, safety and health, motivation and communication, and labor/management relations. Prerequisite: Junior status. 3 hours Lecture and Discussion — 3 credits

BA 3028  
**Supervision and Management**  
This course is designed to enhance the supervision and management skills and competencies of the participant. The course provides the individual with knowledge, models, skills and understandings needed for effective supervision and management of the work environment and workforce. The supervisor's role in the organization's operation is the courses focus. Prerequisite: Junior status. 3 hours Lecture and Discussion — 3 credits

BA 3034  
**Real Estate Fundamentals**  
The purpose of the course is to acquaint the student with the fundamentals of the real estate business. The course includes the economics and social importance of real estate, the history of land tenure, the origin of land titles, and the concepts of real property. Instruction is given in the meaning of real estate law as it pertains to deeds and mortgages, interest in real estate and how title is transferred. Special emphasis is given to the preparation of the Pennsylvania Realtor's Association's standard Agreement of Sale form, and real estate financing and settlement charges. The student is further instructed in real estate brokerage, listing, selling, the ethics of the real estate profession, and the rules and regulations on licenses and Agreements of Sale as prescribed by the Pennsylvania Real Estate Commission. Prerequisite: Junior Status. 3 hours Lecture — 3 credits

BA 3049  
**Financial Institutions**  
This course ties together the concepts that were first learned in economics and finance. It focuses on the roles of various institutions (stock exchanges, insurance companies, banks, investment banks and brokerages) and the role of the Federal Reserve in creating money and managing the economy. The two newest trends of securitization and globalization are analyzed. Prerequisite: Macroeconomics and Finance. 3 hours Lecture and Discussion — 3 credits

BA 3126  
**Fundamentals of Investing**  
This course will introduce the student to various investing philosophies, types of investments, analytical tools for evaluating investments, and portfolio development. This course will develop these topics using the text, online financial sites, and simulated stock market activities. Prerequisite: Principles of Accounting II and Finance. 3 hours Lecture and Discussion — 3 credits

BA 3127  
**Finance**  
The focus of this course is to develop a working knowledge of financial statements, the cost of money, the trade-off between risk and return, the time value of money and the valuation techniques for stocks and bonds. The completion of this course will provide the student with a knowledge base to move on to more complex areas of finance, investments and financial planning. Prerequisite: Principles of Accounting II, Business Statistics I and Junior status. 3 hours Lecture and Discussion — 3 credits

BA 3128  
**E-Commerce/Business-to-Business**  
This course’s objective is to provide the student the basic principles of electronic commerce. It focuses on the foundation of electronic commerce and how electronic commerce has affected the business environment. The student will learn applications and new technologies for business-to-business electronic commerce. Prerequisite: Familiar with Windows Operating System. 3 hours Lecture and Discussion — 3 credits

BA 3129  
**Operations Management**  
A study of the analyzing, planning, organizing, controlling and operating functions of the executive involved in the operations part of the business. Prerequisite: Microeconomics, Principles of Accounting II, Business Statistics II and Junior status. 3 hours Lecture and Discussion — 3 credits

BA 3131  
**Sports Management and Leadership**  
This course is designed to give the student a basic overall understanding of the information needs of the sports manager. This course includes a study of the evolution and scope of sport management sports ethics, tort and civil liability, facilities management, sports marketing, and the basic techniques of sports economics, budgeting and financing. Prerequisites:
Introduction to Business and Junior status. 3 hours Lecture and Discussion — 3 credits

**BA 3138, 3239**
*Intermediate Accounting I and II*
These two courses in intermediate accounting present accounting procedures and theories beyond the principles level. A review of the accounting cycle, preparation of financial statements, analysis of transactions, plant and equipment theory, assets and debits, capital stock and surplus, error correction, and financial statement analysis are among the topics presented in both parts. The new requirements under the Sarbanes-Oxley Act, that will combat fraud and poor reporting practices are discussed. Ethics – the professional standards of conduct are emphasized in both courses. Prerequisites: Principles of Accounting II for Intermediate Accounting I, Intermediate Accounting I for Intermediate Accounting II. 3 hours Lecture and Discussion each — 3 credits each

**BA 3141**
*Small Business Management*
A practical, applied and conceptual approach to organizing and operating a small business. Course emphasis is on understanding business operations by working with exercises and problems that present themselves in small business operations. The student will present his/her business plan to the class. Prerequisite: Junior status. Suggested: Accounting Fundamentals and Microcomputer Applications. 3 hours Lecture, Discussion and Problem Solving — 3 credits

**BA 3209**
*Auditing*
This course presents a conceptual approach to auditing for those students planning to enter the public accounting field or who intend to work in private or commercial accounting. It outlines audit techniques, the philosophy and environment of auditing, the standards required, and the professional ethical and the legal liability of the auditor. To make the content practical and contemporary a case study is included. Prerequisites: Intermediate Accounting II and Junior status. 3 hours Lecture — 3 credits

**BA 3218**
*Principles of Online Marketing*
The course objective is to provide the student with the basic principles of Internet planning and marketing. Marketing plan implementation issues are discussed through the use of Internet research. A marketing plan presentation is required using the context of the entire course program. Prerequisite: Familiar with Windows Operating System and have some knowledge of marketing. 3 hours Lecture and Discussion — 3 credits

**BA 3229**
*Organizational Behavior*
This course is designed to introduce students to theories, concepts and exercises concerning individual and group behavior in an organizational context and environment. Topics included are: motivation, group process and dynamics, interpersonal communications and influence, leadership and reward, and managing conflict and change. Classroom activities will exemplify the managerial setting and environment. Prerequisite: Human Resource Management or Supervision and Management and Junior status. 3 hours Lecture and Discussion — 3 credits

**BA 3232**
*Marketing Financial Services*
This course explores the nature of service marketing and how it differs from product marketing. The concepts of tangibility, pricing, simultaneity, segmentation and planning will be covered. The make-up of the financial services industry will be reviewed. At the completion of this course, the student will be able to prepare a full marketing plan for a financial service business. Prerequisite: Principles of Marketing, Financial Institutions. 3 hours Lecture and Discussion — 3 credits

**BA 3233**
*Sports Facility Planning and Management*
A study of the planning and the managing of a sports facility; the promotion of the facility image, and the assessment of an actual event from event planning through to box office management. Prerequisite: Junior status. 3 hours Lecture and Discussion—3 credits

**BA 3235**
*Sports Law*
This course gives the students an overall understanding into the field of the legal process within the sports enterprise, as it relates to contract, tort, constitutional, antitrust and labor laws. Topics covered include The NCAA, global amateur sports, women sports, player agents and criminal racial and social issues. Prerequisites: Business Law I and II and Junior status. 3 hours Lecture and Discussion — 3 credits
Course Descriptions

BA 3240
Risk Management and Insurance
Course covers the basic ideas, problems, and principles found in all types of modern insurance and other methods of handling risk. It emphasizes the fundamental unifying elements of risk and insurance. It focuses on critical thinking and problem solving as it pertains to the problem of risk and insurance. Prerequisite: Junior status. 3 hours Lecture and Discussion — 3 credits

BA 4016
Senior Special Topics
An independent study course for degree candidates with senior standing who wish, with the approval of the Department Chairperson, to investigate special business topics in depth. Prerequisite: Senior status. 1-3 credits

BA 4020
Fraud Examination
This course presents a broad overview of the nature and magnitude of fraud as it affects the global economy. Develop an understanding of the role of the accounting profession in presenting and detecting fraud. Understand the importance of ethics and value in combating fraud. Prerequisite: Senior Status. 3 hours Lecture and Discussion — 3 credits

BA 4036
Federal Corporate Income Tax
This course is an introduction to federal taxation as it applies to corporations. The course will cover corporate formations, operations, capital structure, liquidation, pass-through entities such as partnerships and S corporations will be studied as compared to the traditional C corporate structure. Prerequisites: Principles of Accounting I and II, and Taxes. Offered in the Evening only. Senior status. 3 hours Lecture and Discussion — 3 credits

BA 4041
Marketing Research
Focus on the marketing research process as an aid in marketing decision making. Defining marketing problems, identifying marketing information needs, developing methods to gather information, and applying research results to marketing problems. Prerequisites: Principles of Marketing and Business Statistics I. Required for Marketing major and Senior status. 3 hours Lecture — 3 credits

BA 4043
Professional Development Seminar
A weekly series of workshops presented by local employers to help students prepare for their transition from college to a career in business, education and government. The student will enhance their professional development skills which are necessary to be successful in today's competitive workplace. Prerequisite: Senior status. 1 hour Lecture and Discussion — 1 credit

BA 4044
Marketing Management
This course studies the strategies used by marketing managers to solve business problems. Case studies and computer simulations are learning tools used to make marketing decisions by analyzing constraints and opportunities and formulate marketing plans. Prerequisite: Principles of Marketing and Junior/Senior status. 3 hours Lecture and Discussion — 3 credits

BA 4047
The Governance of Sports in a Global Community
Advanced in-depth study of the governing organization of sports at all levels in the global community. Selected topics include international sport governance, the Olympic movement, national sport policies, and the selection process at international sporting events. Prerequisite: Junior status. 3 hours Lecture and Discussion — 3 credits

BA 4119
Estate Planning
This course introduces the student to the process of developing an estate plan. The course investigates why there is a need for estate planning, identifies possible goals of the plan and explains techniques commonly used to achieve these goals. The probate process, the Federal Unified Tax System, gift taxation, trusts, marital deductions, bypass planning, and post-mortem planning techniques will be addressed. Prerequisite: Business Law I and II and Taxation. 3 hours Lecture and Discussion — 3 credits

BA 4132
Industrial Relations
A study of current labor/management relations, federal labor law, and a summary of labor history and labor economics. Special emphasis and a simulation regarding collective bargaining is included. Prerequisite: Human Resource Management, and Senior Status or approval of Instructor. 3 hours Lecture and Discussion — 3 credits
BA 4144
*Advanced Accounting*
This course in Advanced Accounting presents techniques and theories beyond the intermediate level. It equips the student to analyze accounting information in business activity. Partnerships, managerial, government accounting, liquidation, and parent and subsidiary accounts are among the topics discussed. Prerequisite: Intermediate Accounting II and Junior status. 3 hours Lecture and Discussion — 3 credits

BA 4146
*Sales*
This course deals with the behavioral science approach to vendor/vendee relations. Problems concerning communication, organization, and motivation are discussed. Heavy emphasis is placed on understanding the selling process through person-to-person and group selling situations. This course also includes the use of case studies and role play exercises. Elective course for Business Administration majors and other students. Prerequisite: Principles of Marketing and Junior status. 3 hours Lecture and Discussion — 3 credits

BA 4233
*Personal Finance*
This course introduces the student to the concepts, tools, and applications of personal finance and investments. It assumes little or no prior knowledge to this subject matter and focuses on helping the student understand the process of financial planning and the logic that drives it. For many students, this course is their initial and only exposure to personal finance. Tools, techniques, and equations are easily forgotten but logic and fundamental principles that drive their use, once understood, will stay. These principles become part of the students’ “Financial Personality” and are available to help them deal effectively with an ever-changing financial environment. 3 hours Lecture and Discussion — 3 credits

BA 4235
*Financial and Retirement Planning*
This course introduces the student to the process of financial and retirement planning. The course looks into why there is a need for financial planning and explains the process from the data gathering stage through to the monitoring of the final plan. The course focuses special attention on the retirement planning process including sources of retirement funds and evaluating the risk of clients outliving their resources. The course also explains the regulatory and ethical issues around financial planning. Prerequisite: Fundamentals of Investing and Risk Management and Insurance. 3 hours Lecture and discussion — 3 credits

BA 4236
*Federal Income Tax*
A study of the federal tax system, its history and significant federal legislation. The student reviews individual federal tax returns and tax planning procedures. The influence of taxes on business is also discussed. The student will prepare tax returns on a computer-based package. Prerequisite: Principles of Accounting II and Junior status. 3 hours Lecture and Discussion — 3 credits

BA 4239
*International Trade*
A study of the theory and practice of international trade and its application to current problems and policies, including such topics as tariffs, quotas, international payments, economic unions of foreign states, and foreign exchange. Prerequisite: Microeconomics, Principles of Marketing, Finance and Senior status and completion of all Business core courses or with permission of instructor. 3 hours Lecture and Discussion — 3 credits

BA 4241
*Financing Sports Operations*
A study of financial concepts and their application to the sports environment, including analysis of obtaining public funding through financing sports activities, selling and pricing of sports tickets, sale of licensed products and services, sale of concessions, and exploring types of sponsorship benefits. Prerequisites: Principles of Accounting I and II, Finance and Junior Status. 3 hours Lecture and Discussion — 3 credits

BA 4242
*Cost Accounting*
A study of the various factors in cost relationships that effectively aid management in the efficient operation of business enterprises. Budgets and cost reports for various levels of management. Prerequisite: Junior Status, Accounting I, II. 3 hours Lecture and Discussion — 3 credits

BA 4244
*Management Seminar*
Management Seminar is designed as an advanced capstone course for all business majors. This course
Course Descriptions

represents an opportunity for all business majors to review, extend and apply all previous coursework completed in the business curriculum using strategic planning as a framework. This course will combine theory and practice, and will require active participation in a computer simulation game in which students will develop a cohesive strategy, formulate a business plan, “manage” a company, and report the results to a Board of Directors. Prerequisite: Senior Status. 3 hours Lecture and Discussion — 3 credits

BA 4247
Advertising
Planning, implementing, and evaluating advertising and sales promotion activities. Determining advertising objectives, selection of campaign themes and media, evaluating advertisements and campaigns, controlling advertising and promotion expenditures, the client-agency relationship, regulations and the social and economic effects of advertising. Prerequisite: Principles of Marketing. 3 hours Lecture and Discussion — 3 credits

BA 4145
Sports Marketing and Media Relations
A study of the basic principle of marketing and how it applies to sports, leisure and recreation. Provides the student an overview of the mass media industry as they interface with the sport industry. 3 hours Lecture and Discussion — 3 credits

Specialized Methods and Techniques
Each major department offers a series of courses designed to acquaint the student with various applications of his/her professional specialty. In the Business Administration Program this requirement is fulfilled by satisfactory completion of IT 1011 Information Technology Concepts, IT 1012 Computer Applications and IT 1031 Intermediate Computer Applications.

Employment Program

BA 2370
Employment Program
Each student in Business Administration is required to spend 500 hours in approved jobs related to the student’s major. Registration for each Employment Program must occur prior to the beginning of a relevant experience. Registration materials are available from the Office of Career and Life Education, located in Segal Hall.

Chemistry

CH 0011
Basic Chemistry
A non-credit lecture and laboratory course designed to prepare students for General Chemistry I and II. Energy, matter, and change with appropriate problem-solving applications will be emphasized. Formulas, equations, and descriptive chemistry will be covered in the laboratory. 3 hours Lecture and 3 hours Laboratory — 0 credits

CH 1001
Chemistry Fundamentals
This course presents basic chemical concepts to non-scientists. Students will gain the foundation of chemical knowledge so they can make informed personal and professional decisions. Lecture topics include structure, bonding and reactivity, water and solutions, and bio-organic and environmental chemistries. This course does not satisfy the requirement for General Chemistry I. 3 hours Lecture — 3 credits

CH 1001L
Chemistry Fundamentals Laboratory
Students will develop some familiarity with laboratory skills. This course is to be taken concurrently with or after having successfully completed the Chemistry Fundamentals lecture. 3 hours Laboratory — 1 credit

CH 1103
General Chemistry I
General Chemistry I is a course which introduces many of the basic principles of chemistry. Topics covered include atomic structure, periodic trends, molecular bonding and shapes, intermolecular forces and the properties of solutions. Also discussed are ionic and covalent compounds, the mole concept, chemical equations, stoichiometry, the major classes of chemical reactions, and thermochromy. Prerequisites: high school chemistry. This course is to be taken concurrently with the General Chemistry I Laboratory. 3 hours Lecture — 3 credits

CH 1103L
General Chemistry I Laboratory
The experiments in the laboratory section are designed to reinforce the concepts discussed in lecture as well as to develop basic laboratory skills. Topics covered include unit conversion and nomenclature, redox and precipitation reactions, stoichiometry, calorimetry, titrations and molecular structure. This course is to be taken concurrently with or after