Course Descriptions

Note: The list of courses is presented alphabetically by Subject Title. Courses are listed under each Subject in numerical order starting from lowest to the highest.

**ACT - ACCOUNTING**

**ACT 115**  Computer Based Accounting  (3)
Prerequisite: ACT 140.
This course introduces students to concepts of Managerial and Financial Accounting using computer based software packages “Excel” and “Tally.”

**ACT 140**  Fundamentals of Financial Accounting  (3)
Prerequisite: MAT 30.
This is a course in Financial Accounting theory and practices, with primary emphasis upon the accounting cycle and the preparation and interpretation of corporate financial statements.

**ACT 145**  Managerial Accounting  (3)
Prerequisites: Math 30 and ACT 140.
This is an advanced course that goes beyond the scope of a second semester course in Fundamentals of Accounting. The development, interpretation and use of relevant cost behavior, control and traceability concepts for management planning, controlling and decision making are emphasized. Topics include: an introduction to product costing, performance standards and variance analysis, responsibility accounting, segment profitability, alternative choice decisions, and capital budgeting.

**ACT 200**  Auditing and Corporate Governance  (3)
Prerequisite: ACT 140.
The course is intended to help students develop critical and analytical abilities in regard to Financial Accounting and Auditing Topics and theory. Further it will enhance students’ understanding of the relationships that exist between financial reporting and auditing. The course also helps students to understand the concepts on corporate governance.

**ACT 340/B**  Financial Accounting and Reporting II  (3)
Prerequisites: A minimum GPA Of 2.0, MAT 30, and ACT 340/A.
Accounting theory and practice related to such topics as current and long-term liabilities, stockholders’ equity, investments, statement of cash flows, and financial statement analysis. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

**ACT 341**  Financial Accounting and Reporting III  (3)
Prerequisites: A minimum 2.0 overall GPA, and ACT 340/B.
Accounting theory and practice related to topics such as income taxes, pensions, owners’ equity, earnings per share, and the statement of cash flows. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

**ACT 344**  Computer Applications in Accounting  (3)
Prerequisites: A minimum GPA Of 2.0, MAT 30, CPT 103, and ACT 145.
Managerial and Financial Accounting applications of computers-budgeting, financial planning and analysis, and accounting information processing systems. The student is introduced to software similar to that used by small and medium-sized businesses. Microcomputers are used to perform operations involving general ledger, accounts receivable, accounts payable, financial statement analysis, depreciation and payroll. A portion of the course involves using electronic spreadsheet in planning and managerial decision making.

**ACT 345**  Cost Accounting  (3)
Prerequisites: A minimum GPA of 2.0, MAT 30, ACT 145 and Junior Level.
The study of the basic principles of cost determination for, and control of, manufacturing and distribution activities. Topics include job-order costing, process costing, cost allocations, and the development and use of standard costs within a system of absorption costing.
ACT 348  Auditing  (3)
Prerequisites: A minimum GPA of 2.0, ACT 344, ACT 340/B, and Senior Level.
An introduction to auditing practice. Includes the social role of auditing and the services offered by auditors in internal, governmental, and public accounting practice. Emphasis is on the financial auditing process, including professional ethics, audit risk assessment, study and evaluation of internal control, gathering and evaluating audit evidence, and audit reporting decisions.

ART

ART 100  Introduction to Middle Eastern Art  (3)
A survey of major achievements in Arabian and Islamic architecture, sculpture, and painting from the Middle East and Islamic countries. Emphasis on religious, historical and social contexts of the arts.

AVIA – AIRPORT MANAGEMENT

AVIA 111  Introduction to aviation management  (3)
Pre requisite: ENG 101 (Concurrent)
An introduction to the study of the aviation industry including management issues, critical policies, administrative functions and other issues.

AVIA 120  Introduction to airline management  (3)
Pre requisite: ECON 110, AVIA 111
An introduction to the managerial aspects of the airline industry: economic and organizational characteristics, marketing, operational scheduling, fleet planning, and labor relations.

AVIA 121  Introduction to airport management  (3)
Pre requisite: ECON 110, AVIA 111
This course provides an understanding of the airport as an essential part of the air transport system. The course investigates the airport functional departments, examines the airport master planning process, and reviews the operational and management services of both large and small airports and considers environment parameters.

AVIA 207  Introduction to Air Transportation
Pre requisite: ECON 120
A survey of the historical development of the air transport system covering facilities, impact of regulations, problems encountered in commercial air transport, future requirements, airline operations, economics, and social implications

AVIA 208  Economics of Air Transportation
Pre requisite: AVIA 207
Main development phases of the Oman air transport industry, overview of current air transport policies, the roles and responsibilities of national and international control bodies, the cost of providing air transport services, the pricing of air transport services, airline management and control and airport planning and management.

AVIA 211  Aviation Safety and Security  (3)
Pre requisite: ENG 102
This course provides the basis for understanding safety and security concerns in the aviation industry.

AVIA 214  Principles of Accident Prevention and Causation  (3)
This course builds on AVIA 211 and provides students with detailed case studies of various types of accidents in the aviation industry and how to prevent them.

AVIA 215  Introduction to Aviation Law & Policy(3)
Prerequisites: AVIA 111.
This course examines the legal foundations for regulatory policies of state and federal governments over the airline industry.

AVIA 218  Airport Planning and Design  (3)
Prerequisites, AVIA 121
This course makes students to understand how airports are designed and planned. This course provides the basic understanding on issues relating to aircraft vehicle performance and airport interaction, and planning aspects of air transportation systems.

AVIA 226  Airport Administration and Finance  (3)
Prerequisites: FIN 204, AVIA 111
This course examines the relevant aspects on organizational, political, and financial administration of public and private civil use airports. This course mainly focuses on public relations management, safety and security issues, employee organizational structures, financial and accounting strategies, revenue and expense sources, economic impacts of airport operations, airport performance measurement standards, and current trends and issues of direct concern to airport administrators.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AVIA 250</td>
<td>History of flight</td>
<td>3</td>
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<td></td>
<td>Prerequisites: AVIA 111</td>
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<td>This course traces the development of flying and reviews both the technological developments from a societal point of view and the global impact of man’s quest for time in the air. It focuses on the people and the technologies which have developed the present global aviation system.</td>
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<tr>
<td>AVIA 305</td>
<td>Introduction to Meteorology</td>
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<td>Prerequisites: PHY 01</td>
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<td>Weather plays a critical role in the health of the entire aviation industry. This course examines the various aspects of weather and the role in places in airline and airport management.</td>
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<td>AVIA 308</td>
<td>Air Operations Management</td>
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<td>Prerequisites: AVIA 111, MAT 105</td>
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<td></td>
<td>This course introduces students to planning and control through the study of service industries and operations management with reference to aviation industry.</td>
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<td>AVIA 309</td>
<td>Air Traffic Control</td>
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<td>Prerequisites: AVIA 215, MAT 100</td>
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<td></td>
<td>An overview of Air Traffic Control responsibilities, communications, record keeping, regulations and handling of air traffic emergencies</td>
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<td>AVIA 312</td>
<td>Human Resource Management in the Aviation Industry</td>
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<td>Prerequisites: MAN 210</td>
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<td></td>
<td>An introduction to the ideas and practices of human resource management including those that are unique to the aviation industry. The study focuses on the areas of organizational processes, planning, standards, motivation, and roles of suppliers and customer care</td>
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<td>AVIA 318</td>
<td>Airports and the environment</td>
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<td>Prerequisite: AVIA 207</td>
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<td>Airports have the environmental impact of self contained cities. The environmental impact is crucial especially in terms of the decision making process for building and expanding the. This course examines the numerous impacts that airports can have on the environment.</td>
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<td>AVIA 320</td>
<td>Airport Marketing</td>
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<td>Prerequisite: AVIA111, MAR 206</td>
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<td>An examination into principles of effective marketing of airports. Particular attention is paid to the e-commerce facets of airport marketing.</td>
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<td>AVIA 325</td>
<td>Air Cargo</td>
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<td>Prerequisite: AVIA 207</td>
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<td></td>
<td>This course examines the role of air cargo operations in the airline industry and studies the impact of this issue on the construction and development of facilities globally.</td>
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<td>BNK 130</td>
<td>Understanding Finance and Financial Statements</td>
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<td>Prerequisite: ACT 140; For Associate Degree Only.</td>
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<td>The course introduces the student to the functions of Finance in an organization and to different types of financial statement analysis. The topics covered include an overview of financial statements, horizontal, vertical, comparative analysis, trend and ratio analysis.</td>
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<td>BNK 201</td>
<td>Corporate Banking</td>
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<td>Prerequisites: MAT 30, ACT 145, ECON120 (concurrently), and a Minimum GPA of 2.0.</td>
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<td>A common sense approach to understanding the lending environment within a bank. Topics include management issues and lending policies, the account officer’s roles, skills, and abilities, the loan requests and the methods of analysis, loan structuring, pricing, documentation and administration, problem-loan causes, defenses, and resolutions, bank-asset portfolio construction, lending policies, liabilities management, bank capital structure, short-run cash management, financial market rates and flows, and quantitative models for bank management.</td>
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<tr>
<td>BIO 100</td>
<td>General Biology</td>
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<td>Prerequisite: Concurrent ENG 101.</td>
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<td>Emphasis on fundamental principles of biology. Lecture course.</td>
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BUS – GENERAL BUSINESS ADMINISTRATION

BUS 101  Introduction to Business  (3)
Prerequisites: Concurrent ENG 101, BUS 03, or passing Business Placement Test.
A survey of modern business and business practices. Gives the student a general knowledge of the modern business environment. Topics include principles of management, production, marketing, finance, and personnel; the operation of business in a free enterprise system; the governments’ role in business; and forms of business ownership and organization.

BUS 156  Legal Environment of Business  (3)
Prerequisites: ACT 140, and ECON 110.
An introduction to the nature and meaning of law, legal process and institutions. The legal environment is defined as: the attitude of the government towards business and the historical development of the attitude; current trends of public control in taxation, regulation of commerce, and competition; freedom of contract, antitrust legislation and its relationship to marketing, mergers and acquisition; and labor management relations.

BUS 195  Topics in Business  (3)
Prerequisite: BUS 101.
Study of selected special problems in business and administration. May be repeated for credit with different topics.

BUS 205  Contemporary Business Communication  (3)
Prerequisites: ENG 102 and a minimum GPA of 2.0.
A forum wherein business writing and speaking skills are addressed. Communication unique to business organizations is critiqued. Emphasis is placed on writing and verbal communication skills necessary to succeed in the business environment.

BUS 250  Business Statistics
(Previously offered as MAT 250)
Prerequisites: A minimum GPA of 2.0, Mat 100, MAT 105, and CPT 103.
Construction and use of statistical models for business management. Students will learn techniques used for relational analysis and business forecasting and how to apply them in a business context. Tools include CHI-Square tests of statistical independence; analysis of variance; simple linear regression and correlation; multiple linear regression; and extrapolative techniques such as moving averages and exponential smoothing. Emphasis is placed on problem definition, construction of statistical models, analysis of data, and interpretation of results. Computers are used for extensive analyses of case data.

CHEM – CHEMISTRY

CHEM 10  Fundamentals of Chemistry          (3)
Prerequisite: Concurrent ENG 101.
This course examines the role of Chemistry in everyday life and in the environment.

COM – COMMUNICATION

COM 30  Interpersonal Communication  (3)
Prerequisite: ENG 101.
Development of basic one-to-one communication skills. Includes self-awareness, listening, nonverbal communication, feedback, role-playing, and receiver awareness.
COM 70  Introduction to the Cinema  (3)
Prerequisite: Concurrent ENG 101.
COM 70 is an introduction to the "reading" and the comprehension of film as a language and to cinema as an institution. This course is a survey of the discipline of Film Studies, its methodologies, genres and histories. Through an examination of various cinematic forms, styles, and genres, roughly following a historical chronology, the course aims to develop the critical skills crucial to the discourse of Film Studies.

COM 40  Intercultural Communication  (3)
Prerequisite: ENG 101.
This course studies a variety of cultures and their distinctive modes of communication. This course is designed to help foster awareness of the value of the fundamentals and value of cross cultural exchanges.

CPT – COMPUTER SCIENCE

COSC 0010  Fundamentals of Computing  (0)
Prerequisite: Level 4.
The course introduces the basic concepts of data processing and explains computer based information systems in general. The course syllabus is divided into 8 sections. The first section introduces Computer fundamentals which gives the basic awareness about a computer system. The second section explains the basic principles of operation of a personal computer system and file management. The third and fourth sections introduce Microsoft Word and Microsoft Excel which explain the documentation and spreadsheet manipulation. The last two sections give introductions to presentations and data base concepts using Microsoft PowerPoint and Microsoft Access respectively. This course also introduces fundamentals of computer networks and internet.

COSC 1300  Computer Application in Business  (3)
Prerequisite: COSC 10
This course covers advanced topics in Spreadsheet, Web based tools, Relational database and Statistical Software. The course includes hands-on experiences with exercises and projects to provide students with a thorough working knowledge of real life business applications.

CPT 103  Computers and Information Systems  (3)
Prerequisite: Freshmen status.
The basic concepts of data processing and the fundamental principles of computer-based information systems are studied. The characteristics of computer hardware and software used to implement business applications are considered. Students will develop skills in utilizing microcomputers. This course is recommended for Business and Economics students.

CPT 170  Programming with Visual Basic  (3)
Prerequisite: COSC 10.
This course explores programming in Visual Basic for event-driven applications. Design and implementation of graphical user interfaces (GUI) are explored as primary examples. Additional topics may include DDE, OLE, and interactions with databases.

CPT 182  Programming in C  (3)
Prerequisite: MATH 20 and COSC 10.
An overview of a computer system is presented. Structured design techniques are considered and applied to the development of computer programs. Aspects of a high level language such as C will be studied, including elementary and advanced data types and subprograms. Various features of the UNIX operating system will also be discussed.

CPT 201  Introduction to Java Programming  (3)
Prerequisite: CPT 182/CPT 170.
This course introduces the Java programming language and its use in Internet programming. This will involve programming assignments in Java and their interface with browsers using applets. Students will also be exposed to the Java’s windows toolkit – the AWT. A brief introduction to object-oriented programming concepts will be provided. Other topics will include threads, virtual machines, byte code, and the Java security model.

CPT 220  Data Structures and Problem Solving  (3)
Prerequisite: CPT 182.
Advanced programming techniques including recursion, divide-and-conquer, and backtracking will be considered. A discussion of dynamic data structures such as lists, binary trees, stacks, queues, and priority queues will be presented. An introduction to modular programming, program specification and verification, and analysis of algorithms will be given. Other topics such as two dimensional arrays, Strings and various sorting and searching methods will also be considered.
CPT 240  Computer Systems I: Architecture and Organization (3)

Prerequisite: CPT 182.
Introduces details of computer systems from architectural and organizational points of view. Topics discussed may include data representation, digital logic and basic circuits such as ALU, multiplexers, decoders, flip-flops, registers, RAM and ROM memory, hierarchies, I/O devices, pipelining, parallel and RISC architectures, etc.

CPT 241  Computer Systems II: Programming (3)

Prerequisite: CPT 240.
Continues introduction of computer systems, with assembly programming and its application. Topics covered may include addressing modes, stack manipulations and applications for reentrant and recursive modules, memory interfacing, I/O device interfacing, and serial and parallel communication.

CPT 274  Object Oriented Programming with C++ (3)

Prerequisite: CPT 182.
Introduces object oriented concepts, terminology, and notation. The C++ language is explored including topics such as dynamic memory, exception handling, function and class templates, operator overloading, inheritance, polymorphism, and generic programming with the standard template library. Additional topics may include GUI libraries.

CPT 275  Advanced Programming Techniques (3)

Prerequisite: CPT 220 or ICT 130.
Exploring the UNIX/LINUX Operating System, including its tools and utilities for program development, such as make file, piping and redirection, shell scripts, regular expressions and symbolic debuggers. In addition, this course explores advanced features of C programming language, including various file processing, command line and variable arguments, exception handling and generic interfacing. This course explores the UNIX systems programming including the Process management, Thread management and Inter process communication via sockets.

CPT 278  Design and Analysis of Algorithms (3)

Prerequisite: CPT 220.
Addresses the design and mathematical analysis of fundamental algorithms in computer science. Algorithms studied may involve search, sorting, data compression, string manipulation, graph traversal and decomposition, and algebraic and numeric manipulation.

CPT 301  Web Programming Techniques (3)

Prerequisite: CPT 182.
Provides an introduction to Web page development using current techniques (HTML/XML). It also covers programming in Perl, CGI scripting, and Java script. The current Web servers are compared for issues such as comparison, capacity planning, and installation.

CPT 302  Java and Internet Programming (3)

Prerequisite: CPT 301.
A projects-oriented course using the Java programming language for Internet programming. The course focuses on current technologies in Java, including (AWI), threads, the Java security model, and Beans. Other topics may include sockets, IO Streams, Server-side Java, and Remote Method Invocation.

CPT 304  Electronic Commerce Protocols (3)

Prerequisites: CPT 275 and MAT 245.
Provides a technical introduction to electronic commerce over the Internet, examining topics such as electronic data interchange, digital currency, and electronic catalogs. The course discusses technical issues such as telecommunications infrastructure, data warehousing, software agents, and storage retrieval of multimedia information. Other topics may include cryptographic techniques as applicable to web-site development, management of data in a secure manner, authentication and confidentiality, different levels of security (transaction, network, and protocol), and digital signatures.

CPT 305  User Interface Development (3)

Prerequisite: CPT 275.
Focuses on user interface design standards as a programming problem. It covers topics such as functional vs. aesthetic concerns, elegance and simplicity, interference between competing elements, visual variables, perceptual organization for visual structure, grid-based design of module and program, semiotics with images and representation.

CPT 314  Theory of Computation (3)

Prerequisite: CPT 278.
Covers finite state machines and pushdown automata, and their relationship to regular and context-free languages. Also covers minimization of automata, Turing machines, and undecidability. Other topics may include Church’s Thesis, uncomputability, computational complexity, propositional calculus and predicate calculus.

CPT 325  Programming Languages (3)

Prerequisite: CPT 274 or CPT 201.
A study of the principles of modern programming languages. The students perform a comparative study of syntax, semantics, and pragmatics of high-level programming languages. Also provides a discussion of list-processing, object-oriented, functional, procedural, or other programming paradigms.
CPT 328  Program Translation Techniques  (3)
**Prerequisites:** CPT 240, CPT 220.

Looks at the theory of programming languages as well as the theory of program translation as a means for dealing with the conceptual gap introduced by the levels of abstraction. Program translation mechanisms are studies as a means to explore the trade-off between language expressiveness, translation, and execution effectiveness. Particular attention is paid to compilers, with emphasis on constraints induced by syntax and semantics.

CPT 330  Introduction to Artificial Intelligence  (3)
**Prerequisites:** CPT 275 and CPT 278.

An overview of AI applications is presented. An AI programming language, such as Prolog or Lisp, is introduced. Fundamental AI problem solving techniques are applied to heuristic search and game playing. An introduction to knowledge representation and expert systems is given. Topics such as theorem proving, neural networks, and natural language processing may also be studied.

CPT 341  Computer Graphics  (3)
**Prerequisites:** CPT 275 and CPT 278.

The basic architecture of various types of graphics systems is presented. Also presents a detailed description of the basic algorithms for 2-dimensional and 3-dimensional graphics systems. Algorithms for shading, hidden line removal, and rendering in the 3-D systems will be examined. The course involves significant project work.

CPT 350  Software Engineering  (3)
**Prerequisite:** CPT 220.

Introduces software engineering as a discipline, discusses stages of software lifecycle, compares development models such as waterfall, prototyping and incremental/iterative, and compares structured and object-oriented methods. It also discusses software documentation, both internal and external verification/validation, quality assurance, testing methods, maintenance, project management and team structure, metrics, and available tools.

CPT 352  Object-Oriented Analysis and Design  (3)
**Prerequisite:** CPT 275.

Concentrates on modeling using a visual language such as UML, in the context of a generic object-oriented development process. Discusses the object world, analysis/design goals as the driving development force, different system views, use cases, static and dynamic models, diagrams, modeling with patterns, and principles of responsibility assignments. The course may be supplemented with a CASE tool.

CPT 354  Software System Architectures  (3)
**Prerequisite:** CPT 352.

Concerned with the design, modeling, and evaluation of complex software systems at the architectural level of abstraction. Covers basic principles of architectural system design, and may cover topics such as multi-tiered and packaged architectures, model-view and model-service separation, design supports for distributed and client-server applications, design patterns, package interfaces, notation, persistence, and GUI frameworks.

CPT 356  Software Development Processes  (3)
**Prerequisites:** CPT 350 or CPT 352.

This course is an in-depth study of software development processes, in the context of an actual project. Discussion includes object-oriented processes such as Rational Unified Process, as well as process management issues such as scheduling, risk-assessment, various metrics, and the selection of appropriate development methodology and tools.

CPT 361  Database Management Systems  (3)
**Prerequisites:** CPT 275 and CPT 278.

Presents the foundations, concepts and principles of database design. Various models of data representation are considered, including the hierarchical and relational models. Also considers some of the implementation issues for database systems.

CPT 362  Information Retrieval  (3)
**Prerequisites:** CPT 275 and CPT 278.

Presents deterministic models of information retrieval systems, including conventional Boolean, fuzzy set theory, p-norm, and vector space models. Other topics include probabilistic models, text analysis and automatic indexing, automatic query formulation, system-user adaptation and learning mechanisms, evaluation of retrieval, review of new theories and future directions, and intelligent information retrieval.

CPT 373  Computer Networks and Communications  (3)
**Prerequisites:** CPT 220 and MAT 132.

Communication systems will be considered in the context of the ISO standard for systems interconnection. Various types of networks will be studied including wide area networks, local area networks, and fiber optic networks.

CPT 374  Client-Server Architectures  (3)
**Prerequisites:** CPT 275 and MAT 245.

Studies communications systems in the context of the ISO standard for systems interconnection. There is hands-on exposure to development of client-server applications.
CPT 376  Operating Systems (3)
**Prerequisites:** CPT 240.
Studies the structure of a generic operating system, considering in detail the algorithms for interprocess communication, process scheduling, resource management, memory management, file systems, and device management. Topics in security may also be examined. Examples from pertinent operating systems are presented throughout, and use of the algorithms in modern operating systems is examined. Substantial practical work, using the UNIX operating system is required.

CPT 381  Topics in Computer Science (3)
**Prerequisite:** Consent of the Instructor.
A course on selected topics in Computer Science to be determined by recent developments in the field and interest of the instructor. In general, the special topics will focus on issues related to advance undergraduate topics.

CPT 390  Computer Science Project (3)
**Prerequisites:** Final semester before graduation.
A course to provide the student an opportunity to work on an advisor-supervised project.

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ECON – ECONOMICS

ECON 110  Principles of Microeconomics (3)
**Prerequisite:** MAT 30.
Introduction to the determinants of household demand, production and cost, and market prices. Applies the principles of individual decision-making behavior to understanding goods, services, and resource markets.

ECON 120  Principles of Macroeconomics (3)
**Prerequisite:** ECON 110.
Introduction to the determination of levels of and changes in aggregate income, output, employment, and prices. Applies economic principles of choice to the formulation and achievement of public policies that affect national employment, income distribution, and economic growth.

ECON 200  Oman & AGCC Economies (3)
**Prerequisite:** ECON 120.
Economics 200 is a topics course which looks at significant aspects of the economy of Oman and other Gulf Cooperation Countries. Topics included are: The structure and historical development of GCC economies, labor market and human resource development, GCC economic integration - Custom & Monetary Unions, Economic trends & future outlook of Oman & GCC countries.

ECON 205  Economic Development (3)
**Prerequisites:** ECON 120.
The course examines the determinants of underdevelopment basis of economic development, strategies and policies, growth and development theories, and analyses policies and strategies to promote economic development. Emphasis will be given to the roles of market forces, state interventions, and the private sector. We will analyze the roles of human and capital resources, the specific contributions of different sectors of the economy to economic growth, the expected gains from international trade, the role of technological innovation, and the political economy of government behavior. Specific issues that will be addressed include stabilization and adjustment policies, import substitution and export-led industrialization strategies, the role of agriculture in economic development, and sustainability in the use of natural resources.

ECON 207  The Business Firm: History, Theory & Policy (3)
**Prerequisite:** ECON 120 or consent of instructor.
This course presents a history of the development of modern business firms and examines the evolution of the economic theory of the firm. Special attention is paid to the role that firms play in fostering social and economic development. The ultimate objective of the course will be to provide students with a deeper understanding of firms so they can make better policy decisions as firm owners, managers, lawmakers, regulators, and voters.

ECON 220  Money, Banking and Monetary Theory (3)
**Prerequisite:** ECON 120.
Factors influencing bank reserves and the money supply. Ability of the Federal Reserves (Central Bank) System and the Treasury (Ministry of Finance) to control these factors. Introduction to monetary theory; integration of monetary phenomena with national income theory. Analysis of current policy issues.

ECON 230  International Economics (3)
**Prerequisites:** ECON 120.
The course is intended to tackle different issues in international economics. Topics include world institutions, international trade institutions and system, markets under fixed and flexible exchange rate systems, and the balance of payments.
ECON 251   Intermediate Economic Theory: 
Microeconomics   (3)  
Prerequisites: ECON 120 and Junior Level. 
Analysis of prices in terms of equilibrium of the business firm and consumer demand in markets of varying degrees of competition.

ECON 252   Intermediate Economic Theory: 
Macroeconomics   (3)  
Prerequisites: ECON 120, ECON 220, and Junior Level. 
Study of national income, expenditure and the forces determining the level of economic activity. Special emphasis on the theory of income determination and its application to public policy.

ECON 265   Economic Statistics   (3)  
Prerequisites: MAT 30, ECON 110, ECON 120, and Junior Level. 
An introduction to economic data sources, data interpretation and statistical inference as used in economic analysis. Emphasizes the testing of economic hypotheses and the development and estimation of economic models. Introduces the use of statistical software used in economics.

ECON 350   Mathematical Economics   (3)  
Prerequisites: ECON 265 and ECON 120. 
This course uses calculus and other mathematical tools to analyze economic phenomena. In addition to exploring techniques used to solve unconstrained and constrained optimization problems, the course also examines how matrix algebra is used in economic modeling. This course allows students to mathematically analyze economic models which receive graphical treatment in lower level courses.

ECON 360   Natural Resource Economics   (3)  
Prerequisites: ECON 120 and ECON 200. 
The objective of this course is for students to learn how basic economic theory can be used to understand and analyze environmental and resource utilization. The assigned readings will familiarize students with key concepts in economic theory. Class activities and assignments will primarily focus on how these concepts can be used to analyze and understand "real world" environmental and natural resource issues... Issues concerning the optimal and sustainable use of natural resources are examined in this context. Some emphasis is given to potential policy responses to environmental problems. Special analysis will be given to Oman AGCC oil and natural gas resources.

ECON 395   Special Readings in Economics   (3)  
Prerequisites: 4th year Level. 
Unscheduled, independent directed intensive readings on topics mutually acceptable to student and instructor. It is composed of oral and written work in one area. This subject is mainly opened to students interested in advanced work in economics after graduation.

ECON 396   Senior Project   (3)  
Prerequisites: 4th year Level. 
The course serves as a capstone for the BA program and also provides a product for assessment purposes. It is an independent research project intended to integrate knowledge from previous theories and practice courses into a coherent whole. The course is also designed to prepare students for professional or graduate work in the field. Students are required to write on a realistic economic problem beginning with the problem statement, through proposal, documentation and presentation/delivery. Students assume specific roles in order to complete the necessary tasks. They are expected to exhibit individual responsibility and maturity, and be willing to devote the necessary level of effort to complete their project on time. A faculty project Advisor provides general supervision and guidance during the semester, but students are fully responsible for their own success. Students will select a project topic and give a written and oral report. The topic/policy issues chosen should be chosen from a list of topics of Omani nature. The size should be a minimum of 5000 words.
ENG 101  English Composition I  (3)
Prerequisites:  Advanced ESL or Passing of the English Placement Test.
An academic writing course focusing on the fundamental components of good academic writing, this course reinforces a student’s writing skills through practice in writing and editing. The student analyzes and synthesizes ideas and expresses them in essay form. Emphasis is placed on argument through achieving clarity of expression, support of thesis, and effectiveness of organization. Students practice these skills in response to personal experience and discussion, assigned readings, and research.

ENG 102  English Composition II  (3)
Prerequisite: ENG 101.
Emphasis is on writing for academic purposes including the research paper. Techniques of research and drawing information from sources will be included in writing samples. Critical thinking skills and logic form an integral part of the course. Students will seek to refine their research and creative writing skills by having access to the library and the internet. Students will develop the confidence to communicate effectively through writing. Moreover, this course will allow for much independence and responsibility on the part of the individual student. Students must receive a minimum grade of C-in ENG 101 to register for this course.

ENG 105  Introduction to Public Speaking  (3)
Prerequisite: ENG 101.
This course seeks to introduce students to public speaking through a discussion of Theory and Application of communication theories to a number of various speaking situations (mainly persuasive and informative). Students are required to research and present at least 5 speeches. At the end of this class, they are supposed to have developed self confidence and boldness in presenting speeches in their personal and professional life. They are also expected to be able to present a well-reasoned, well-presented speech appropriate to the situation in which it is presented.

ENG 17  American Literary Masterpieces  (3)
Prerequisite: ENG 102.
An introduction to major themes and works in American literature from the nineteenth century to the present. This course will include selected themes such as the frontier, race and racism, wealth and poverty, etc. It will also include a selection of major writers such as Whitman, O’Neill, Faulkner, Ellison and Morrison.

ENG 112  Topics in Writing  (3)
Prerequisite: ENG 102 and Sophomore Level.
“Topics in Writing” is a one-semester course designed for the upper level undergraduate students. It should be sufficient to provide the necessary writing and research tools needed in preparing a research paper. Students taking this course have to meet two hours per week. This course offers the students fundamental training in the techniques in research conducting and writing. Oral and written communication skills will be introduced, with more emphasis on the writing skill. Special emphasis is given to the procedures employed in writing an objective, well-organized research paper, and the methods of research.

ENG 132  English Literature  (3)
Prerequisite: ENG 102.
A survey of English Literature during the nineteenth and twentieth centuries. The course features the reading and analysis of representative works of selected major writers.

ENG 140  World Literature
Prerequisite: ENG 101.
This introductory course to World Literature refers to literature in English from different parts of the world. It considers a selection of literary texts belonging to different literary genres and periods. This course also aims at introducing basic literary concepts and major literary theories and approaches from different literary schools.

ENGL 2320 Contemporary World Literature  (3)
Prerequisite: ENG 101.
This introductory course to Contemporary World Literature refers to 20th century literature in English from different parts of the world. It considers a selection of literary texts belonging to different literary genres (essay, fiction, poetry, drama) through various themes (e.g. self, gender, culture). This course also aims at introducing basic literary concepts, and major literary theories and approaches. Literary texts and topics vary from semester to semester.

ENG 212  Business Writing  (3)
Prerequisites: ENG 102 and Sophomore Level.
This course further develops the experienced writer’s style and analytical capabilities to the level of sophistication necessary for upper-division writing assignments and for business and professional settings. Writing assignments
may include business correspondence, reports, resumes, proposals, analyses, feasibility studies, and articles for in-house publications. The course emphasizes clarity, conciseness, organization, format, style, tone and mechanical correctness; expands upon student’s research and documentation skills; and requires research in university library. Students will also develop strategies for using and adapting various communication technologies to manage projects and produce informative professional documents. Finally, they will understand and implement various principles of format, layout, and design of professional documents that meet multiple needs. The polished written output for the class will be gathered in a “portfolio” at the end of the semester.

ENG 213  Technical Writing  (3)
Prerequisite: ENG102 and Sophomore Level.
Technical writing requires the ability to communicate complex technical material in a clear fashion, to write documents that persuade and argue effectively, and to communicate to different audiences. Students will also learn to organize their thoughts and develop them logically, to build evidence and make a persuasive argument, to write clearly and concisely, and to self-edit. Students submit frequent writing assignments, act as peer editors, participate in class discussions, and read and analyze class texts. In this course, students will acquire the skills for writing and revising technical documents in terms of audience, purpose and organization. Includes a section on research methodology.

ENG 280  Topics in Arab Literature  (3)
Prerequisite: ENG 101. and Sophomore Level.
This course examines topics in Arab literary works belonging to different genres (Essay, fiction, poetry, and drama). It introduces basic literary concepts, and considers major themes in Arab literature (such as tradition and modernity; East and West, male and female writing; feminist reading). Literary texts and topics vary from semester to semester.

ESL – ENGLISH AS A SECOND LANGUAGE

English as a Second Language (ESL) comprises of Beginners to Advanced Levels (Levels 1 to 4) with the following four distinctive components of the language skills:

ENGL 0011, 0021, 0031 & 0041  Speaking, Listening and Note-taking
To develop fluency and correctness in speaking English; to increase conversational vocabulary; to understand, practice, and adapt features of pronunciation by listening to recorded material; to increase conversational listening skills and to organize and present short lectures.

To increase skills in listening; to recognize organizational clues; to develop vocabulary and comprehension strategies; to distinguish between important points and details; to take effective class notes should be taken as early as possible in order to get the most benefit from your other credit courses.

ENGL 0012, 0022, 0032 & 0042  Reading and Writing
To develop writing skills including essay development, organization, vocabulary, and editing for grammar, punctuation and structure; to develop reading skills and strategies.

ENGL 0013, 0023, 0033 & 0043  Grammar
To review grammar rules, to understand the meaning and use of these structures in American English; to recognize and use these structures correctly in speaking and writing.

FIN – FINANCE

FIN 204  Financial Management  (3)
Prerequisites: ECON 120, ACT 145, MAT 105, and a minimum 2.0 GPA.
The first course in finance. The study of a firm’s need for funds; the institutions, instruments, and markets concerned with raising funds; and the techniques of analysis used to determine how effectively these funds, once raised are invested within the firm. The basics of financial analysis, forecasting, operating and financial leverage; working capital, current asset management short term financing; time-value concepts and practices; and cost of capital equity financing, dividend policy.

FIN 334  Investments  (3)
Prerequisites: FIN 204, a minimum 2.0 GPA, and Junior Level.
Financial analysis of debt and equity instruments available on organized exchanges and in less tangible over-the-counter markets. Techniques of such analysis are presented in context with economic and management circumstances
within the company, industry, and economy and portfolio management.

FIN 337  Principles of Real Estate  (3)
Prerequisites:  FIN 204, a minimum 2.0 GPA, and Junior Level.
As an introduction to the real estate industry, the course broadly explores all phases of acquisitions, development and disposal of real property. Topics include legal requirements of contracts, property rights, valuation and appraisal techniques, marketing, brokerage operations and practices, mortgage financing, leasing and property management.

FIN 350  Financial Policies  (3)
Prerequisites:  FIN 204, a minimum 2.0 GPA, and Junior Level.
The intensification and application of the concepts developed in 204. Special emphasis is given to the development of top management policies and their application toward complex problems of finance. Techniques for identifying and dealing with these problems before they become acute will be investigated. Cases will be integrated with appropriate outside reading.

FIN 356  Commercial Bank Management  (3)
Prerequisites:  ECON 120, FIN 204, a minimum 2.0 GPA, and Junior Level.
Corporate finance and microeconomics are applied to matters of importance to commercial bankers. Among the subjects treated are bank asset portfolio construction, lending policies, liabilities management, bank capital structure, short-run cash management, financial market rates and flows, and quantitative models for bank management. Commercial bank management is analyzed from an internal viewpoint in terms of what bank managers should look for in asset management and why; what market conditions they should be aware of; and what techniques they can use to meet changing economic and financial conditions.

FIN 380  International Finance  (3)
Prerequisites:  Econ 120, FIN 204 a minimum 2.0 GPA, and Senior Level.
A study of the international financial markets, instruments, and portfolio strategies. Topics will include international risks, foreign diversification and hedging techniques for international exposure. The use of derivative instruments and special markets are evaluated in the international corporate/investment settings.

GEDU-HEALTH

GEDU 132  Personal Health  (3)
Prerequisite: Concurrent ENG 101.
This course is a study of factors that contribute to the physical and mental well being of individuals at all stages in their lives. Particular attention will be given to threats to well being within the society of Oman and preventative measures that can be adopted.

HIST – HISTORY

HIST 03  American Civilization I  (3)
Prerequisite: ENG 101.
The evolution and growth of Europe from the fall of the Roman Empire to 1500. The course discusses the evolution of institutions, ideas and the formation of European culture.

HIST 04  American Civilization II  (3)
Prerequisite: ENG 101.
The evolution and growth of Europe from 1500 to the present. The course discusses the evolution of institutions, ideas and the formation of European culture.

HIST 05  World Civilization I  (3)
Prerequisite: ENG 101.
The evolution and growth of Europe from the inception of human history to approximately 1600.
HIST 08  World Civilization II  
**Prerequisite:** ENG101.  
This course studies the development of major civilizations of the world from the early modern era, approximately 1600, to the present.

HIST 104  Topics in American Civilization  
**Prerequisite:** ENG 101.  
This course studies topics in the civilization of the United States from the civil war to the present. Themes to be covered include the “Frontier” and the “American dream”; USA becoming a super power; racism and civil rights movement; sex discrimination and feminism. A comparative approach with other cultures is adopted throughout this course.

HIST 200  Topics on Contemporary World Civilization  
**Prerequisite:** ENG 101.  
This course studies a range of global concerns, from industrialization to globalization, including social movements and rise of feminism, impact of imperialism and international conflicts, cultural and intellectual trends.

IDS – INTERDISCIPLINARY

IDS 220  Contemporary American Culture  
**Prerequisite:** ENG 102.  
This course is an interdisciplinary course. It focuses on contemporary American culture that is roughly American culture from 1930 to the present, and helps students to understand contemporary American culture through a study of its literary, artistic, and social expressions.

ICT – INFORMATION COMMUNICATION TECHNOLOGY

ICT 101  Fundamentals of Information Technology  
**Prerequisite:** COSC 10.  
This course introduces students to the academic discipline of IT, its principles, and its practices, the impact of information technology on individuals and the society. Relationship of IT to other computing disciplines. It discusses the principles behind spreadsheets, word processing, and web browser technology. The Students will be proficient in their use through laboratory based work. General principles of the computer, support devices, single and multi-user operating systems, networks, client-server systems and the rapidly emerging role of the World Wide Web are also discussed in this course.

ICT 125  Computer Architecture and Organization  
**Prerequisite:** ICT 101.  
Introduces details of computer systems from architectural and organization points of view. Topics discussed may include data representation, digital logic an basic circuits such as ALU, multiplexes, decoders, flip – flops, registers, RAM and ROM memory, memory hierarchies, I/O devices, pipelining, parallel and RISC architectures, Digital logic and systems, File structures etc.

ICT 128  Web Application Techniques  
**Prerequisite:** ICT 101.  
The course introduces the knowledge required for representing information in the World Wide Web for automation, integration, and reuse across web applications. The techniques that can integrate stand-alone applications with the web features are also discussed. Topics include Client-Server environment, Internet Service Providers, HTML Standards, Webpage Basics, Scripting, User Interaction, Webpage Design tools, Website Maintenance issues, and Web portals.

ICT 130  Introduction to Operating System  
**Prerequisites:** ICT 125.  
An introduction to major operating systems and their components; Topics include processes, concurrency and synchronization, deadlock, processor allocation, memory management, I/O devices and file management, and distributed processing. Techniques in operating system design, implementation, and evaluation.

ICT 145  Internship  
**Prerequisite:** Sophomore Level.  
Working in collaboration with the industry. The purpose of this course is to provide students with a structured and supervised work experience in an approved agency that integrates academic enquiry into a professional work experience.

ICT 205  Software Engineering  
**Prerequisite:** ICT 130/CPT 182.  
This subject introduces the fundamental concepts underlying the design and implementation of large software projects. The student will gain an awareness of theoretical considerations underpinning software engineering and skills in using the practical techniques embodying them. An awareness of and skills in applying practical project management techniques in a team will also be gained.
ICT 210 Introduction to E-Commerce  
Prerequisite: CPT 201 and ICT 130.
Examines the impact of emerging technologies on how we conduct business in a wired world. Topics include: ingredients for a Commerce Enabled Web site from hardware and software to necessary operational processes; copyright, authentication, encryption, certification, and security; on-line payment strategies (SET, E-cash, check, and charge) and companies offering solutions: E-Commerce Business Models.

ICT 220 Database Management Systems  (3)  
Prerequisites: CPT 182/ICT 130.
This course surveys topics in database management systems. Topics include access methods, data models (network, hierarchical, relational, semantic, and object-oriented), query languages, database design, query optimization, concurrency control, recovery, security, integrity, client-server architecture, and distributed database systems. A database application project will be assigned. Advanced topics in database systems, including distributed database systems, query optimization, concurrency control, knowledge bases, deductive database systems, and object-oriented database systems. Additional topics may include benchmarking, scientific databases, and parallelism. Software engineering principles will be applied to the development of components of a database management system.

ICT 225 Data Communication & Networks  (3)  
Prerequisite: ICT 125.
This course introduces the fundamental concepts and terminology of data communication and networking. Topics will include: fundamentals of telecommunications, data transmission mechanisms, telecommunication media and technologies, considerations for LAN and WAN implementations, the Internet protocols, emerging telecommunications technologies, and trends in the telecommunications industry.

ICT 230 Advanced JAVA Programming  (3)  
Prerequisite: CPT 201.
The goal of this course is to design and develop an Internet based “e-commerce” web site using UML, Java Servlets, Java Server Pages, and JDBC. The course will begin by introducing database access using JDBC. After a basic introduction to JDBC the student will learn how to create dynamic web pages using Java Servlets and Java Server Pages. Once the basics have been covered, each student will participate in the design by reviewing use cases, activity diagrams, and class diagrams using UML. Once the design has been completed each student will implement the required data model, HTML pages, Java Servlets, and Java Server Pages. The course will finish with an evaluation of the design by examining what would be required to replace the current web based interface with a Swing interface.

ICT 250 Project I  (3)  
Prerequisite: ICT 205 / ICT 220 and at least 40 credits.
The knowledge gained from the various courses in Information Communication Technology and other related areas will be used with a live project. Working in small groups or individually, students will design and develop a real life information system.

ICT 340 Wireless and Mobile Communications  (3)
The course provides an overview of the latest developments and trends in wireless mobile communications, and addresses the impact of wireless transmission and user mobility on the design and management of wireless mobile systems.

ICT 361 Network security  (3)
The course covers theory and practice of computer security, focusing in particular on the security aspects of the web and Internet. It surveys cryptographic tools used to provide security. It then reviews how these tools are utilized in the internet protocols and applications.. System security issues, such as viruses, intrusion, and firewalls, will also be covered.

ICT 371 Network Management  (3)

LOM – LOGISTICS AND OPERATIONS MANAGEMENT

LOM 252 Introduction to Operations Management  
Prerequisites: A minimum GPA of 2.0, ECON 110, BUS 250, and ACT 145.
The first course in logistics and operations management that examines the concepts, processes, and institutions which are fundamental to an understanding of manufacturing and service operations within organizations. Emphasis is on the management and organization of operations and upon the application of quantitative methods to the solution of strategic, tactical and operational problems.
MAN 200  Industrial Management  (3)
Prerequisites: BUS 101, a minimum, 2.0 GPA, and Sophomore Level.
The course provides students with a conceptual framework for understanding the basic management decisions with respect to production/operations management functions in industrial and service organizations. The course focuses attention on the concepts and techniques for carefully managing the processes to produce products and services and emphasizes efficiency and effective of process. The areas of emphasis include types of manufacturing systems, concepts in production planning and control, facilities planning, materials management and inventory control, maintenance management, industrial safety and quality management. The course methodology shall involve lectures, case studies and practical assignments.

MAN 210  Management and Organizational Behavior  (3)
Prerequisites: BUS 101 and Sophomore Level.
The first course in Management for bachelor degree students, in which the behavior of individuals and groups in an organizational setting is studied. Specific topics examined include: leadership, organizational design, and conflict resolution, as well as a basic coverage of management principles. In covering these topics, both classic and current perspectives are provided.

MAN 230  Professional Skills Development  (3)
Prerequisites: BUS 101, a minimum 2.0 GPA, and Sophomore Level.
This course focuses on career management. Topics include job search, interviews, resumes and cover letters, presentation skills, business etiquette, entry strategies, and career alternatives.

MAN 309  Human Resource Management  (3)
Prerequisites: MAT 105, MAN 210, a minimum 2.0 GPA, and Junior Level.
In depth examination of selected human resource management issues from a contemporary managers viewpoint. Topics examined include: employee selection, performance appraisal, training and development, compensation, legal issues, and labor relations.

MAN 311  Advanced Management and Organizational Behavior  (3)
Prerequisites: MAN 210, a minimum 2.0 GPA, and Junior Level.
Building upon 210, this course provides a more detailed examination of motivation, leadership, group process, decision - making, job design, and organizational development. In addition to providing more detail in terms of content, this course provides the student with considerable practical experience through the use of class exercises, case studies, and small group discussions.

MAN 317  International Management  (3)
Prerequisites: A minimum 2.0 GPA, ECON 120, and MAN 210.
A study of international business and management practices. Topics covered include an introduction to international management and the multinational enterprise, the cultural environment of international management, planning in an international setting, organizing for international operations, directing international operations, international staffing, preparing employees for international assignments, and the control process in an international context.

MAN 319  Employee Training & Development  (3)
Prerequisites: A minimum 2.00 GPA, MAN 309, and Senior Level.
An intensive study of training of organizations, including needs analysis, learning theory, management development, and development training objectives and programs. Projects and exercises are used to supplement the readings.

MAN 392  Entrepreneurship/Small Business Management  (3)
Prerequisites: BUS 156, FIN 204, MAR 206, MAN 210, a minimum 2.0 GPA, and Junior Level.
This integrative general management course is designed to communicate the academic principles of business management applicable to solving of problems of small – and medium - size business and assist in their development. This course will provide a background in the forms of business, the development of business plans and system integration, venture capital, accounting, procurement, promotion, financing, distribution and negotiations for initial organization, and operation and expansion of the firm.
MAR 115  Direct Marketing Methods  (3)
For Associate Degree Only.
Prerequisite: BUS 101.
A practical presentation of direct marketing methods and techniques covering telemarketing, direct mail, television, newspapers and magazines. Topics presented include creating and producing direct marketing messages, media analysis and selection, and operational management. Intended as practical, a hands-on experience for business managers/marketers and as a skill developer for the direct marketing professional. Includes a section on marketing using the internet.

MAR 203  Business to Business Marketing  (3)
For Associate Degree Only.
Prerequisites: ECON 110 and MAR 115.
The course is aimed to give an understanding about the concepts and importance of business marketing. It focuses on how business marketing is different from consumer marketing. Business marketing process, its essential functions and the institutions performing them. Attention is focused on the major policies such as product, pricing, promotion and distribution, which underlie the multifarious activities of marketing institutions and managerial, economic, and societal implications of such policies. It also provides means to evaluate the firm’s capabilities develop marketing strategies and introduce marketing techniques to meet the firm’s objectives.

MAR 206  Basic Marketing  (3)
Prerequisites: ECON 110, 2.0 GPA.
The first course in marketing that examines the character and importance of the marketing process, its essential functions and the institutions performing them. Attention is focused on the major policies (such as distribution, product, price, and promotion) which underlie the multifarious activities of marketing institutions and managerial, economic, and societal implications of such policies. Presents the psychological and societal motivations that translate need through demand to satisfaction. Provide means to evaluate the firm’s capabilities develop marketing strategies and introduce marketing techniques to meet objectives.

MAR 222  Sales Management  (3)
Prerequisites: ECON 110 and BUS 101.
The course is aimed to provide a detailed understanding of how personal selling is critical to the success of marketing. The course will provide critical thinking skills as well as practical knowledge and skills needed in personal selling in competitive market place. It is also aimed to give a clear idea as to the recruitment, selection, and training of sales persons and their compensation plans. A detailed idea is also given regarding the sales control techniques.

MAR 270  Management of Promotion  (3)
Prerequisites: MAR 206, a minimum 2.0 GPA, and Junior Level.
A study of the design, organization, and implementation of the marketing communications mix. Various methods, such as advertising, personal selling, and publicity are analyzed as alternatives for use alone, or in combination, to stimulate demand, reseller support, and buyer preference. Particular topics considered include: media selection, sales promotional, packaging, and selling strategy, and their relationships in the promotion process.

MAR 275  Marketing Research  (3)
Prerequisites: CPT 103, MAR 20, BUS 250, a minimum 2.0 GPA, and Senior Level.
An investigation of the acquisition, presentation, and application of marketing information for management. Particular problems considered are defining information requirements, evaluating research findings, and utilizing information. Statistical methods, models, and/or cases are employed to illustrate problems, such as sales forecasts, market delineation, buyer motives, store location, and performance of marketing functions.

MAR 301  Consumer Behavior  (3)
Prerequisites: MAR 206, a minimum 2.0 GPA, and Junior Level.
A study of such consumer functions as decision making, attitude formation and change, cognition, perception, and learning. The marketing concepts of product positioning, segmentation, brand loyalty, shopping preference and diffusion of innovations are considered in context with the environmental, ethical, multicultural and social influences on an increasingly diverse American consumer.

MAR 315  Marketing Management  (3)
Prerequisites: MAR 206, a minimum 2.0 GPA, and Senior Level.
An intensive analysis of major marketing decisions facing the firm, such as levels, mix, allocation, and strategy of marketing efforts. Specific decision areas investigated include market determination, pricing physical distribution, product policy, promotion, channel management, and buyer behavior. Competitive, political, legal, and social factors that may affect such areas of decision are discussed. Cases, models, and problems are used heavily.
### MAR 316 International Marketing (3)
*Prerequisites:* MAR 206, a minimum 2.0 GPA, and Senior Level
Marketing management problems, techniques and strategies needed to apply the marketing concept to the world marketplace. Understanding a country's cultural and environmental impact on the marketing plan is emphasized, as well as competing in markets of various cultures. Worldwide consumerism, economic and social development, the spread of multinational corporations, business ethics, and current economic and marketing issues are examined.

### MAT – MATHEMATICS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MATH 0010</td>
<td>Basic Mathematics</td>
<td>0</td>
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<td></td>
<td><em>Prerequisite:</em> Concurrent with Level 03.</td>
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<td></td>
<td>Basic Mathematics course is designed to ensure the general mathematical skills of students entering to University programs. This course is assessed for arithmetic, basic trigonometry, understanding of coordinate systems, elementary handling methods of mathematical calculations without the use of calculators and the handling of algebraic expressions.</td>
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<tr>
<td>MATH 0020</td>
<td>Applied Mathematics</td>
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<td><em>Prerequisite:</em> Pass in Placement Test I or Basic Mathematics.</td>
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<td>Applied Mathematics is focused for students entering to higher education in Business, Education, Linguistic, Social sciences etc. The topics covered in Applied Mathematics are Basic Algebra, commercial Mathematics and some important concepts of related probability and Statistics. This course also includes the real life and business related application problems.</td>
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<tr>
<td>MATH 0021</td>
<td>Pure Mathematics</td>
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<td></td>
<td><em>Prerequisite:</em> Pass in Placement Test level 1 or Basic Mathematics.</td>
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<td>Pure Mathematics is designed to cater the need of students entering to Engineering, Sciences, Health Sciences etc. The topics covered are Basic Algebra, basic Trigonometric concepts, related application problems and related probability and Statistics. This course enables the students to enhance their skills in utilizing abstract mathematics in problem solving techniques.</td>
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<tr>
<td>MATH 30</td>
<td>College Algebra</td>
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<td><em>Prerequisites:</em> MAT 03 or a satisfactory score on the College's mathematics placement examination.</td>
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<td></td>
<td>Topics in algebra and probability, polynomial functions, the binomial theorem, logarithms, exponentials, and solutions to systems of equations.</td>
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<tr>
<td>MATH 35</td>
<td>Trigonometry</td>
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<tr>
<td></td>
<td><em>Prerequisite:</em> MATH 20A study of the trigonometric and inverse trigonometric functions with emphasis on trigonometric identities and equations.</td>
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<tr>
<td>MAT 80</td>
<td>Analytic Geometry and Calculus I</td>
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<td></td>
<td><em>Prerequisites:</em> MATH 21.</td>
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<tr>
<td></td>
<td>Introduction to analytic geometry, differential calculus, and integral calculus. MAT 80, 175, and 180 form the calculus sequence.</td>
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<tr>
<td>MAT 90</td>
<td>Calculus Concepts</td>
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<td><em>Prerequisite:</em> MATH 20.</td>
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<td></td>
<td>A study of the basic techniques of differential and integral calculus and their applications to real world situations. Introduce the basic concepts and techniques of linear algebra and simple differential equations which are appropriate to science and technology.</td>
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<tr>
<td>MAT 100</td>
<td>Basic Calculus</td>
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<td><em>Prerequisite:</em> MATH 30/MATH 20.</td>
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<tr>
<td></td>
<td>Introduction to plane analytic geometry and basic differential and integral calculus with application to various areas. No credit for Mathematics majors. Credit not granted for both MAT 80 and 100.</td>
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<tr>
<td>MAT 105</td>
<td>Basic Probability and Statistics</td>
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<td><em>Prerequisite:</em> MATH 30/MATH 20.</td>
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<td></td>
<td>An introduction to probability and statistics. Topics include the concept of probability and its properties, descriptive statistics, discrete and continuous random variables, expected value, distribution functions, the central limit theorem, random sampling and sampling distributions. Credit not granted for more than one of MAT 132 and MAT 105.</td>
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<tr>
<td>MAT 132</td>
<td>Applied Statistics I</td>
<td>3</td>
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<td><em>Prerequisite:</em> MATH 30/MATH 21.</td>
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<td>This course introduces students to some basic statistical concepts and reinforces some of the methods learned in previous math courses. The course will provide the students with the basic Knowledge of Probability and statistic to help them in research. An introduction to the basic ideas and tools of statistics. Introductory data analysis, statistics modeling, probability and statistics inference.</td>
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<tr>
<td>MAT 175</td>
<td>Analytic Geometry and Calculus II</td>
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<td></td>
<td><em>Prerequisite:</em> MATH 80.</td>
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</tbody>
</table>
|             | A second course in a sequence of courses including Analytical geometry, Differential calculus and Integral Calculus. This series is recommended for majors in
engineering, the physical sciences and mathematics. Topics include the following: The derivatives and anti-derivatives of exponential, logarithmic and transcendental functions, technique of integration, further application of integrals, parametric equations and polar coordinates and sequence and series.

MAT 180 Analytic Geometry and Calculus III (5)  
Prerequisite: MAT 175.  
This is an advanced course and the third course in the series of courses on analytical geometry and calculus. The topics include solid analytic geometry, three dimensional vector space, functions of two or more variables, partial derivatives, multiple integrals, their applications and vector fields.

MAT 202 Introduction to Differential Equations (3)  
Prerequisite: MAT 180.  
Topics will be chosen from linear differential equations, equations with constant coefficients, Laplace transforms, power series solutions, systems of ordinary differential equations.

MAT 245 Elementary Linear Algebra (3)  
Prerequisite: MAT 175 or MAT 100.  
An introduction to linear algebra. Topics will include complex numbers, geometric vectors in two and three dimensions and their linear transformations, the algebra of matrices, determinants, solutions of systems of equations, eigenvalues and eigenvectors.

MAT 255 Discrete Structures (3)  
Prerequisite: MAT 175 or 100, and CPT 182. (Same as CPT 255)  
Treats fundamental ideas in discrete structures and serves as a foundation for subsequent course in both Mathematics and Computer Science. Provides an introduction to techniques of mathematical reasoning with examples derived from computer science. Topics include logic, set algebra, equivalence relations and partitions, functions, mathematical induction, elementary number theory, cardinality, recurrence relations, basic combinatorial methods, trees and graphs. Credit not granted for more than one of CPT 255, MAT 250, and MAT 255.

MAT 323 Numerical Analysis I (3)  
Prerequisites: MAT 202, 245, and ability to program in an upper-level language.  
Solutions of equations, interpolation and approximation, numerical differentiation and integration, and numerical solution of initial value problems in ordinary differential equations. Selected algorithms will be programmed for solution on computers.

MAT 324 Numerical Analysis II (3)  
Prerequisite: MAT 323 or consent of instructor.  
Topics chosen from: the numerical solution of systems of linear equations; the eigenvalue/eigenvector problem; numerical solution of Partial Differential Equations (PDE); numerical solution of stiff Ordinary Differential Equations (ODE); boundary value problems; sparse matrix methods; approximation theory; optimization theory; digital filters; integral equations.

MAT 355 Combinatorics (3)  
Prerequisites: CPT/MAT 255 and MAT 180.  
Advanced counting methods are introduced, including the use of generating functions for the solution of recurrences and difference equations. Additional topics may include: graphs and trees, combinatorial designs, combinatorial games, error-correcting codes, and finite-state machines.

MATH 2311 Calculus III (3)  
Prerequisites: MAT 175  
The calculus of vector-valued functions is introduced. Partial differentiation and multiple integration are studied along with curves and surfaces in three dimensions.

MIS – MANAGEMENT INFORMATION SYSTEMS

MIS 110 Introduction to Management Information Systems (3)  
Prerequisite: ENG 101.  
This course is concerned with the role of information systems in managing organizations to make them more competitive and efficient. Specific topics include organizational and technical foundation of information systems and building and managing information systems.

MIS 212 Database Management System (3)  
Prerequisites: MIS 224 and a minimum GPA of 2.0.  
This course provides an introduction to the design and use of database in meeting business information needs. Topics include database planning, conceptual design, and data administration. The concepts are studied with projects involving the use of current database management system.

MIS 215 Information System Analysis (3)  
Prerequisites: MIS 224, and a minimum GPA of 2.0.  
Techniques and philosophies of system analysis are addressed. Include are: traditional versus structured design methods, computer-based tools for systems analysis,
workbenches, design analysis of database systems, maintenance of existing information system, human/machine interfaces, and security and control.

MIS 224 Managerial Applications of Object-Oriented Programming I (3)
Prerequisites: (CPT 103 or Computer Science 122 or 125) and a 2.0 GPA.
The course provides a study of the UNIX operating system and the C++ programming language as they pertain to managerial applications. In addition, the course will introduce the use of object-oriented programming methodologies.

MIS 225 Managerial Applications of Object - Oriented Programming II (3)
Prerequisites: MIS 224 and a minimum GPA of 2.0.
This course expands object-oriented skills taught in 224. The emphasis in this course is on object-oriented development tools and development in a client server environment. The data management tools will include the use of SQL to access server-based databases.

MIS 280 Electronic Business Strategy (3)
Prerequisites: ICT 128
The course focuses on the linkage between organizational strategy and networked information technologies to implement a rich variety of business models in the national and global contexts connecting individuals, businesses, governments, and other organizations to each other. The course provides an introduction to e-business strategy and the development and architecture of e-business solutions and their components.

MIS 285 Project Management & Practice (3)
Prerequisites: MIS 215/ICT 205
This course covers the principles upon which project management methods are based and it discuss how to manage IS projects from inception to post implementation review. Topics include software and system acquisition standards, factors that affect cost, cost estimation, cost/benefit analysis, risk analysis and legal implications with respect to ownership and use.

MIS 304 The Management of Information System (3)
Prerequisites: MIS 224 and minimum GPA of 2.0.
Aspects and methods for managing the computer and information resources of organizations. Topics include aligning IS plans with corporate plans, MIS organizational structures, demonstrating the value of MIS to senior management, software acquisition, software metrics, project management, security issues, and security auditing etc as they relate to information resources.

MIS 309 Information Technology Hardware and System Software (3)
Prerequisites: ICT 125
This course provides the hardware/software technology background to enable systems development personnel to understand tradeoffs in computer architecture for effective use in a business environment. It explains system architecture for single user, central, and networked computing systems; and single and multi-user operating systems will be covered. Focused mainly on hardware & software installation, configuration and trouble shooting.

MIS 310 Information System Design (3)
Prerequisites: MIS 212, MIS 215, MIS 225 and, a minimum GPA of 2.0.
System Design, implementation, and methods of systems installation and operation are presented. A system development project is required.

MIS 319 Topics in Information Systems (3)
Prerequisite: Consent of the Instructor.
A course on selected topics in Information Systems to be determined by recent developments in the field and interest of the instructor. In general, the special topics will focus on issues related to advance undergraduate topics.

MIS 320 Information System Project (3)
Prerequisites: Final semester before graduation.
The IS project course provides students an exciting opportunity to apply the knowledge & skills acquired through various courses to a real world context. In doing so, the students gain an exposure to the challenges of team building, resource development, and client relations. They also learn to work under time and deliverable constraints, and understand that limited information and pressing deadlines are as real and important as the technical and managerial components of any task.
## PHIL – PHILOSOPHY

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 101</td>
<td>Introduction to Philosophy</td>
<td>3</td>
<td>ENG 101 and Sophomore Level</td>
</tr>
<tr>
<td>PHIL 154</td>
<td>Business Ethics</td>
<td>3</td>
<td>ENG 101, BUS101 and Sophomore Level</td>
</tr>
<tr>
<td>PHIL 160</td>
<td>Formal Logic</td>
<td>3</td>
<td>ENG 101</td>
</tr>
<tr>
<td>PHIL 190</td>
<td>Philosophy of Religion</td>
<td>3</td>
<td>ENG 101</td>
</tr>
<tr>
<td>PHIL 258</td>
<td>Ethics and the Computer</td>
<td>3</td>
<td>ENG 101</td>
</tr>
<tr>
<td>PHIL 2301</td>
<td>Personal and Professional Ethics</td>
<td>3</td>
<td>ENG 101</td>
</tr>
<tr>
<td>PHIL 280</td>
<td>Philosophy of Science</td>
<td>3</td>
<td>PHIL 160 and Sophomore Level</td>
</tr>
<tr>
<td>PHIL 360</td>
<td>Advanced Formal Logic</td>
<td>3</td>
<td>PHIL 160 and Junior</td>
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## POL SCI – POLITICAL SCIENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>POL SCI 140</td>
<td>Public Administration</td>
<td>3</td>
<td>Concurrent with ENG 101</td>
</tr>
<tr>
<td>POL Sci. 180</td>
<td>International Relations</td>
<td>3</td>
<td>ENG 101</td>
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</table>
# PHY – PHYSICS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
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</thead>
<tbody>
<tr>
<td>PHY 001</td>
<td>How Things Work</td>
<td>(3)</td>
<td>Concurrent ENG 101</td>
</tr>
<tr>
<td>PHY 101</td>
<td>Physics Concepts</td>
<td>(3)</td>
<td>MAT 90</td>
</tr>
<tr>
<td>PHY 111</td>
<td>Mechanics and Heat</td>
<td>(5)</td>
<td>MAT 80 or 100</td>
</tr>
<tr>
<td>PHY 112</td>
<td>Electricity, Magnetism, And Optics</td>
<td>(5)</td>
<td>PHY 111</td>
</tr>
<tr>
<td>PHYS 1401</td>
<td>Physics I</td>
<td>(4)</td>
<td>MAT 80 or 100</td>
</tr>
<tr>
<td>PHYS 2401</td>
<td>Physics II</td>
<td>(4)</td>
<td>PHYS 1401</td>
</tr>
</tbody>
</table>

**PHY 001 – How Things Work (3)**
This course provides a practical introduction to understanding common life experiences by using physical institution and basic ideas of physics. Lecture course. (This course does not replace science courses for IT and Computer Science majors.)

**PHY 101 – Physics Concepts (3)**
This course introduces the students to the fundamental principles of mechanics, electricity and magnetism, atomic physics, nuclear physics and quantum mechanics. The course emphasizes on the basic concepts in physics rather than on math.

**PHY 111 – Mechanics and Heat (5)**
An introduction to the phenomena, concepts and laws of mechanics and heat for physics majors and students in other departments. Three hours of lecture, one hour of discussion, and two hours of laboratory per week.

**PHY 112 – Electricity, Magnetism, And Optics (5)**
A phenomenological introduction to the concepts and laws of electricity and magnetism, electromagnetic waves, optics and electrical circuits for physics majors and students in other departments. Three hours of lecture, one hour of discussion, and two hours of laboratory per week.

**PHYS 1401 – Physics I (4)**
Prerequisites: MAT 80 or 100
This course covers two main areas in physics namely mechanics and thermodynamics. Mechanics deals with the motion of objects that are large compared to atoms and move with speeds much lower than the speed of light. Topics include motion in one and two dimensions, Newton’s laws of motion, rotational and rolling motions, concept of energy, conservation laws.

**PHYS 2401 – Physics II (4)**
Prerequisites: PHYS 1401
This course provides a phenomenological introduction to the concepts and laws of electricity and magnetism, electromagnetic waves, optics.

# PRT – PRACTICAL

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRT 300</td>
<td>Work Study (Internship)</td>
<td>(6)</td>
<td>To register for this course, the student must complete at least 30 credit hours. The student will have to work in an approved organization for 300 hours. Students are required to prepare a project report before he/she graduates.</td>
</tr>
</tbody>
</table>

**PRT 300 – Work Study (Internship) (6)**
Prerequisites: To register for this course, the student must complete at least 30 credit hours. The student will have to work in an approved organization for 300 hours. Students are required to prepare a project report before he/she graduates.

# PSYCH – PSYCHOLOGY

<table>
<thead>
<tr>
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<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 03</td>
<td>General Psychology</td>
<td>(3)</td>
<td>ENG 101 and Sophomore Level</td>
</tr>
</tbody>
</table>

**PSYCH 03 – General Psychology (3)**
This course provides a broad coverage of the field of psychology. It teaches the importance of psychology and its relevance to everyday life in an active, involved learning environment that helps develop independent thinking skills.

# SOC – SOCIOLOGY

<table>
<thead>
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<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 10</td>
<td>Introduction to Sociology</td>
<td>(3)</td>
<td>Concurrent ENG 101</td>
</tr>
</tbody>
</table>

**SOC 10 – Introduction to Sociology (3)**
In introductory sociology students will learn to explore society from a sociological viewpoint. Just because we live in a society does not mean that we automatically know about it. Sociological insight is required to see through the explanations of social life. This course provides to expand students’ knowledge about social behavior, organization and diversity within populations, and to familiarize them with the concepts of sociological study and its practical applications. It provides the ideal laboratory in which to study our society and our global neighbors from a more comprehensive and inclusive perspective.
## STAT - STATISTICS

### STAT 2310 Regression Analysis (3)
**Prerequisite:** BUS 250
Measurement of relationships among variables including multiple regressions, partial correlation, and some nonparametric methods.

### STAT 2320 Statistical Software and Data Analysis (3)
**Prerequisite:** BUS 250, COSC 1300
Programming with major statistical packages, emphasizing major statistical techniques and statistical analysis for regression, analysis of variance, descriptive statistics.

### STAT 2350 Probability Theory (3)
**Prerequisite:** MATH 80, MATH 105
Probability spaces; random variables and their distributions; repeated trials; probability limit theorems.

### STAT 2330 Analysis of Variance (3)
**Prerequisite:** STAT 2310
Study of analysis of variance and related modeling techniques for cases with fixed, random, and mixed effects. Exposure to designs other than completely randomized designs including factorial arrangements, repeated measures, nested, and unequal sample size designs.

### STAT 3330 Analysis of Variance (3)
**Prerequisite:** STAT 2310
Study of analysis of variance and related modeling techniques for cases with fixed, random, and mixed effects. Exposure to designs other than completely randomized designs including factorial arrangements, repeated measures, nested, and unequal sample size designs.

### STAT 3340 Intr. to Bayesian Data Analysis (3)
**Prerequisite:** BUS 250
Bayes formulas, choices of prior, empirical Bayesian methods, hierarchical Bayesian methods, statistical computation, Bayesian estimation, model selection, predictive analysis, applications, Bayesian software

### STAT 3360 Statistical Inference (3)
**Prerequisite:** STAT 2350
Sampling point, Estimation; sampling distribution; tests of hypotheses; regression and linear hypotheses.

### STAT 4330 Categorical data analysis (3)
**Prerequisite:** STAT 3360
Discrete distributions, frequency data, multinomial data, chi-square and likelihood ratio tests, logistic regression, log linear models, rates, relative risks, random effects, case studies.

### STAT 4344 Nonparametric Methods (3)
**Prerequisite:** STAT 3360

### STAT 4358 Introduction to Stochastic Processes (3)
**Prerequisite:** STAT 2350
Study of random processes selected from: Markov chains, birth and death processes, random walks, Poisson processes, renewal theory, Brownian motion, Gaussian processes, white noise, spectral analysis, applications such as queuing theory, sequential tests.

### STAT 4360 Applied Multivariate Data Analysis (3)
**Prerequisite:** STAT 3360
Testing mean vectors; Discriminant analysis; Principal components; Factor analysis; Cluster analysis; Structural equation modeling; Graphics.

### STAT 4362 Applied Survival Analysis (3)
**Prerequisite:** STAT 2310 and STAT 3360
Parametric models; Kaplan-Meier estimator; nonparametric estimation of survival and cumulative hazard functions; log-rank test; Cox model; Stratified Cox model; additive hazards model partial likelihood; regression diagnostics; multivariate survival data.

### STAT 4370 Senior Seminar (3)
**Prerequisite:** Instructor’s Consent
The goal of this course is to provide a platform for students to discuss important problems in contemporary mathematical statistics as well as their on-going research. At the end of the seminars on a particular theme, groups of people with common interest in research problems in that topic are expected to work together.

### STAT 4371 Time Series Analysis (3)
**Prerequisite:** STAT 3360
A study of univariate and multivariate time series models and techniques for their analyses. Emphasis is on methodology rather than theory. Examples are drawn from a variety of areas including business, economics and soil science.
STAT 4399 Internship (3)
Prerequisite: Instructor’s Consent
The Internship course is an opportunity to combine academic theory with new, career-related experience in statistics. The Internship in Statistics course is to be taken by statistics students who intern at an appropriate company or government agency performing statistical analysis under supervision of a corporate, or government, affiliate faculty member.