ACCT 101: ACCOUNTING I: (3-0-3)

A survey of the accounting cycle; recording changes in financial position; ledger; journal; trial balance; income measurement; adjusting and closing entries; accounting for merchandising operations; special journals and subsidiary ledgers; accounting for cash; receivables; inventories; plant and equipment.

ACCT 201: ACCOUNTING II: (3-0-3)

Accounting for partnerships and corporations: capital stock; dividends and retained earnings; long term liabilities and investment; statement of changes in financial position; cash flows, analysis and interpretation of financial statements, manufacturing accounts. (Prerequisite: ACCT 101)

ACCT 301: MANAGERIAL ACCOUNTING: (3-0-3)

Introduction to cost behaviour and cost-volume-profit relationships; relevant information and decision making; the master budget; flexible budgets and variances; management control systems and responsibility accounting. (Prerequisite: ACCT 201)

ACCT 311: INTERMEDIATE ACCOUNTING I: (3-0-3)

An intensive study of financial accounting and reporting practices. Particular emphasis on the theoretical foundations, concepts and principles underlying financial statements with emphasis on assets and current liabilities and the process of preparing and presenting financial information about an entity for outside users. Topics vary but typically include: standard setting; the accounting cycle including data accumulation, adjustments and preparation of financial statements; and valuation with a focus on the recognition, measurement and disclosure of revenue, inventory and cost of sales, and plant assets. (Prerequisite: ACCT 201)

ACCT 312: INTERMEDIATE ACCOUNTING II: (3-0-3)

Continued study of concepts and principles underlying financial statements with emphasis on long-term liabilities and stockholders’ equity. Particular emphasis is placed on the process of preparing and presenting financial information about an entity for outside users. Topics vary but typically include analysis of recognition, measurement and disclosure of: equity investments, financing activities (bonded debt, leases, pensions), income taxes, stockholders’ equity, specialized reporting problems and cash flow. (Prerequisite: ACCT 311)
ACCT 320: INTERMEDIATE COST ACCOUNTING: (3-0-3)

A primer on cost allocations, performance measurements, analysis of current cost accounting systems and accounting in an international environment. (Prerequisite: ACCT 301)

ACCT 321: AUDITING: (3-0-3)

An overview of auditing; professional ethics; audit evidence and documentation; the study and evaluation of internal control; audit of cash; securities; receivables; inventories; fixed assets; current and long-term liabilities; proprietary accounts; income statements; the audit report. (Prerequisite: ACCT 201)

ACCT 341: ACCOUNTING SYSTEMS: (3-0-3)

Introduction to technology/accounting information systems and their interface with processes and process re-engineering. Application of systems development life cycle to the engineering of accounting information systems. Emphasis on auditing system security and integrity. Coverage of project management and accounting systems development. Introduction to using a commercial accounting package. (Prerequisite: ACCT 301 or 312)

ACCT 401: ACCOUNTING THEORY: (3-0-3)

Scope of accounting; nature and uses of accounting information; the formulation of an accounting theory; the conceptual framework for financial accounting and reporting; the accounting standards setting process; income and value measurement; current purchasing power accounting; current value accounting.
(Prerequisite: ACCT 312)

ACCT 402: CONTEMPORARY ISSUES IN ACCOUNTING: (3-0-3)

A variable content course with topics that can change from semester to semester. Topics are identified by title in the schedule of classes. Examples are: inflation accounting, market-value-based measurement metrics, accounting for human resources. (Prerequisite: ACCT 312)

ACCT 403: ADVANCED ACCOUNTING: (3-0-3)

Topics include: income determination and equity accounting, and consolidated statements; statement of affairs; fiduciaries; actuarial science. Accounting for business combinations, preparation of consolidated financial statements, home office/branch relationships, and partnerships. (Prerequisite: ACCT 312)

ACCT 404: INTERNATIONAL ACCOUNTING: (3-0-3)

This course reviews major issues in international accounting, including historical, cultural, and environmental influences that impact various national accounting systems. Particular emphasis is placed on surveying accounting practices in different nations especially focusing on international accounting for multi-national corporate operations including taxation. (Prerequisite: ACCT 312)
ACCT 499: PROJECT IN ACCOUNTING: (0-6-3)

A structured, pre-approved project in accounting ordinarily involving (1) research on a particular topic in accounting or (2) reporting on field-work in an accounting organization. (Prerequisite: BFRM 498 and ETHC 391)

ACCT 500: INTRODUCTION TO ACCOUNTING: (2-0-2)

A general overview of the basic concepts and principles of financial accounting, and the procedures and processes of preparing financial statements for both service and merchandising concerns. And detailed view of the generally accepted accounting principles (GAAP), Accounting for various elements of financial statements and disclosure requirements.

ACCT 520: ACCOUNTING THEORY AND POLICY: (3-0-3)

This course provides an overall framework encompassing the entire gamut of accounting theory and application spanning hypotheses, principles, concepts & policies of accounting. In addition, these sub-topical areas, rather than being viewed in isolation, are put in the context of modern developments in business and finance. This course also provides in-depth coverage of comprehensive accountancy theories including the concepts and fundamentals of managerial and financial accountancy with applications of theory to accounting practice. How economics and finance impact accountancy is explored within the framework of this course. (Prerequisite: ACCT522)

ACCT 521: FINANCIAL REPORTING AND CONTROL: (3-0-3)

In this two-part course, first financial reporting in theory is juxtaposed with the preparation of financial reports in accordance with chronological, book data, and predetermined data contained therein. Issues such as the accuracy and truthfulness of the data quoted in the financial reports are discussed. Second, internal auditing with respect to its concepts, fundamentals, components and development are put in the context of manual & electronic accountancy. Reports prepared by internal auditors and submitted to the board of directors & the management levels are studied. (Prerequisite: ACCT 500 or equivalent).

ACCT 522: MANAGERIAL ACCOUNTING: (3-0-3)

This course emphasizes the use of accounting data in the managerial decision making process and in planning and controlling business enterprises. Topics include cost behaviour and cost-volume-profit analysis; cost management systems and activity based costing; relevant information for short run decisions; the budgeting process; management control systems and responsibility accounting; capital budgeting; management control in decentralized organization. (Prerequisite: ACCT 500 or equivalent).

ACCT 523: ADVANCED TOPICS IN ACCOUNTING: (3-0-3)

This course provides an overview of the latest developments in the field of accounting with particular reference to globalization involving multi-national companies in the context of transactions between national and foreign company branches. Specialized topics such as electronic accountancy, the role of accounting in e-commerce and potential development and application of international accounting are explored. (Prerequisite: ACCT 522)
**ACCT 524: AUDITING THEORY AND PRACTICE: (3-0-3)**

This course comprehensively surveys the topics of internal and external auditing: the characteristics and responsibilities of internal or external auditors, the fundamentals of auditing, sample auditing & external auditor reports as to form and content especially in light of the managerial level to which they are submitted and electronic auditing. The course also addresses style of auditing and discusses modern developments in auditing with a view to an assessment of the following risk factors: environmental, external, operational and information auditing risk. (Prerequisite: ACCT 500 or equivalent).

**ACCT 595: PROJECT DISSERTATION IN ACCOUNTING: (0-6-3)**

The student conducts a study on a topic in the field of accounting under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: 21 core credits including MAGT 550).

**ACCT 599: DISSERTATION IN ACCOUNTING: (0-24-12)**

A structured supervised in-depth study on a pre-approved topic in the field of accounting can entail one of two methodologies: (1) a literature-focused study which aims to critically discuss the literature within a specified topic area or (2) a research focused study which aims to draw on practical data to assess critically a specified area or topic. (Prerequisite: 21 core credits including MAGT 550).

**ANTH 101: INTRODUCTION TO ANTHROPOLOGY: (3-0-3)**

This course consists of a history of thought of anthropology and accordingly delves into the theories, schools, concepts and contemporary trends in this field including an understanding of research methods. Special attention is focused on the ethnography of the Arabian Peninsula particularly and on the Arab World generally.

**ARAB 101: COMPOSITION FOR NATIVE SPEAKERS OF ARABIC I: (3-0-3)**

A practical language course which aims at developing the writing skills of native speakers of Arabic. The course develops skills such as journalistic writing and letter writing and pays special attention to the development of personal style.

**ARAB 102: COMPOSITION FOR NATIVE SPEAKERS OF ARABIC II: (3-0-3)**

A refinement of writing skills introduced in the previous course designed to acquaint the student with literary essay writing. (Prerequisite: ARAB 101).

**ARAB 110: ARABIC FOR NON-ARABIC SPEAKING STUDENTS (3-0-3)**

A beginners’ level course in modern classical Arabic for non–Arabic speaking students’. The course develops the students ability in the four skills and focuses on the use of the language in daily communicative situations.
ARAB 120: ARABIC FOR NON-ARABIC SPEAKING STUDENTS II (3-0-3)

A continuation of ARAB 110, offering further practice in using the Arabic language in daily communicative situations. (Prerequisite: ARAB 110)

ARAB 201: INTRODUCTION TO MODERN ARABIC LITERATURE (3-0-3)

This course is intended to help the students appreciate literary texts and generally develop their reading skills. The course will also attempt to acquaint the students with relevant background information pertaining to such major literary epochs and trends through the study of texts from each of these schools such as the Renaissance, Romanticism, Realism and Modernism.
BANK 220: COMMERCIAL BANK MANAGEMENT I: (3-0-3)

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. (Prerequisite: MAGT 121)

BANK 302: MONEY & BANKING: (3-0-3)

The subjects of the course are monetary policy including the goals of monetary policy, the choice of policy instruments, the rule-versus-discretion debate, central bank credibility, arguments for and against central bank independence, and the interplay between the central bank and financial markets. The course looks specifically into the monetary policy process and the operation of the Federal Reserve and the European Central Bank, the regulation and supervision of the financial system, and the internationalization of financial markets. (Prerequisite: ECON 102)

BANK 320: COMMERCIAL BANK MANAGEMENT II: (3-0-3)

An application of financial management concepts to the liquidity management, investment portfolio analysis, capital budgeting, and capital structure decision-making process required by a commercial bank to perform effectively its financial intermediation role within the financial system’s institutional, regulatory, and competitive environment. (Prerequisite: BANK 220)

BANK 321: INTERNATIONAL BANKING: (3-0-3)

This course aims to cover the main principles and problems of international banking. The course is intended to cover both theoretical issues as well as the institutional background to international banking. Theoretical issues include: the theory of the banking firm, the creation of credit and credit rationing, internationalization of banking, and the risks and benefits from financial innovation. Practicalities of central banking, bank regulation, deposit protection, capital adequacy and free banking in addition to selective institutional aspects of international banking also receive attention. (Prerequisite: BANK 220)

BANK 330: ESSENTIALS OF ISLAMIC BANKING: (3-0-3)

The course aims to introduce students to the main principles of Islamic banking and finance and to analyses of the relationship between Islamic banks and conventional banks and Islamic banks and non-financial corporations in the Islamic World and the Middle East in particular. One objective is to understand the principles and practice of modes of Islamic finance for industry and commerce and explore their implications on investment and funding corporations and projects to support development in Muslim societies. Students learn how various Islamic financial instruments are practiced to facilitate business, trade, finance and investment and evaluate current practices of Islamic banks, their merits and limitations. (Prerequisite: BANK 220)
BANK 331: ISLAMIC COMMERCIAL LAW (3-0-3)

The course aims to introduce students to the main principles of Islamic commercial jurisprudence (law) and how this is applied in developing the products of Islamic banking and finance. The course offers the students to understand the source of Islamic law, the main nominate contracts and their hybrid contracts. In particular, the students need to be familiar with the issues of Shariah compliance, different schools of Islamic jurisprudence, ijtihad (the role of Muslim scholars in the interpretation of law) and their impacts on the products and services of Islamic banking and finance.

BANK 401: CORPORATE BANKING LAW & PRACTICE: (3-0-3)

This course provides in-depth coverage of the legal relationships, obligations and requirements in the arena of corporate banking and examines complex elements of law relevant to individuals working within the corporate banking sector from advanced rules of contract to abstruse issues concerning syndicated loans. Students obtain practice in drafting loan agreements and facility letters. (Prerequisite: ECON 301 or BANK 320)

BANK 410: CREDIT ANALYSIS AND LENDING: (3-0-3):

The course imparts a fundamental understanding of credit risk analysis process and then proceeds to cover financial statement analysis, including ratio and cash flow analysis, to facilitate better credit related decision. Various non-financial factors- the business plan, industry/ sector performance and senior management issues- that often affect creditworthiness receive ancillary attention (Prerequisite BANK 310)

BANK 499: PROJECT IN BANKING: (0-6-3)

A structured, pre-approved project in banking ordinarily involving (1) research on a particular topic in banking or (2) reporting on field-work in a banking organization. (Prerequisite: BFRM 498)

BANK 541: ISLAMIC BANKING: (3-0-3)

This course examines some of the fundamental concepts and instruments of Islamic banking and finance. Islamic banking in recent years has generated considerable interest in the subject by becoming attractive to students of economics, finance, and business in both Muslim and non-Muslim countries. The topics covered include broad theoretical and religious principles drawn on Islamic Shari’ah and conventional economics. Among the subjects taught are riba, mutharabah, musharakah, murabahah, baitul mal, gharar, takaful, qard and istisna. The course also attempts to shed some light on the future prospects of Islamic finance in the wake of rapid financial globalization.

BANK 595: PROJECT DISSERTATION IN BANKING: (0-12-6)

The student conducts a study on a topic in the field of banking under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: 21 core credits including MAGT 550)
BANK 599: DISSERTATION IN BANKING: (0-24-12)

A structured supervised in-depth study on a pre-approved topic in the field of banking can entail one of two methodologies: (1) a literature-focused study which aims to critically discuss the literature within a specified topic area or (2) a research focused study which aims to draw on practical data to assess critically a specified area or topic. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defence. (Prerequisite: 21 core credits including MAGT 550)

BFRM498: RESEARCH METHODS IN BUSINESS & FINANCE (3-0-3)

The main objective of this course is to enhance the student’s ability to understand as well as to conduct scientific research and to formulate and propose systematic solutions to business problems. Students acquire skills needed to undertake complex research projects by focusing on research projects germane to various fields of business. (Prerequisite: STAT 202)
CHIN 101: ELEMENTARY CHINESE I (3-0-3)

A CHINESE LANGUAGE PRIMER, THE FIRST IN A SERIES OF THREE ELEMENTARY COURSES. A PRACTICAL FAMILIARIZING STUDENTS WITH THE BASIC RULES OF PRONUNCIATION, READING, SPEAKING, WRITTEN CHINESE LANGUAGE. THE COURSE MATERIAL FOCUSES ON DEVELOPING STUDENTS’ ABILITY TO UNDERSTAND AND EXPRESS CHINESE IN DAILY CONVERSATIONS.

CULT 101: INTRODUCTION TO CULTURAL ISSUES: (3-0-3)

This course is an introductory survey of the basic doctrines and concepts of Arabic and Islamic civilization. It covers reading materials from the Renaissance to modern times and focuses on the influence of Western civilization.

CULT 102: ISLAMIC CULTURE: (3-0-3)

This course aims to give students the opportunity to explore a variety of themes on the topic of Islamic Culture. Diverse issues discussed include: the definition of Islamic culture in terms of Qur'anic studies and Prophetic traditions; the contrasting views of classical and modern Islamic scholars; the impact of Islamic theology on cultural aspects in Islamic society; and the general principles of Islam in different areas of life.

ECCE 201: ELECTRIC CIRCUITS (2-2-3)

This course provides electrical circuit analyses. It includes the following topics: electrical circuits overview, basic laws: Ohm's, KVL, KCL, and Power calculations, Resistive circuits: voltage and current divider rules. Dependent sources, Circuit analysis techniques: Nodal and Mesh analysis. Network theorems: Thevenin's & Norton's, Source transformation, Superposition, Maximum power transfer. Transient analysis of RC, RL and RLC circuits, Sinusoids & phasors, impedance & admittance, AC mesh & nodal analysis, AC power analysis (Pre-Requisites: PHYS 101, MATH 102)

ECCE 203: DIGITAL LOGIC (2-2-3)

This course introduces concepts and ideas of Digital Logic Design. It covers: numbering systems, Boolean Algebra, Logic Gates and combinational logic circuits analysis, combinational network design). MSI Integrated circuits in combinational networks design, and sequential circuits analysis and design. Introduction to basic PLDs, CPLDs, and FPGAs. Introduction to State machines and System design with State machines using VHDL. (Pre-Requisites: ITCS 101)

ECCE 204: MATLAB & SIMULINK (2-2-3)

This course introduces students to MATLAB, a powerful engineering programming environment, and its companion application, Simulink. Topics include array manipulations, control-flow, script and function files, 2-D plotting and editing, and system modeling and simulation using Simulink. Students gain insights into the useful capabilities of MATLAB and Simulink for common engineering applications such as signal processing & communication,
control design, image processing, data analysis and visualization. (Pre-requisite: MATH 102, ITCS 122)

**ECCE 221: ELECTRONIC CIRCUITS (2-2-3)**

This course introduces Analog electronics devices and some relevant concepts of digital Electronics. It includes topics such as: diodes (diode concepts, rectifier and wave shaping circuits), Bipolar Junction Transistors (BJT's), Field Effect Transistors (JFET, MOSFET), DC biasing VI characteristics. Operational Amplifiers and active filters. TTL and CMOS Logic Digital-to-Analog and Analog-to-Digital converters. (Pre-requisite: ECCE 201)

**ECCE 223: DATA STRUCTURES (2-2-3)**

This course introduces common Data structures and their related algorithms. It includes topics such as: Abstract data types. Arrays, Linked Lists, Stacks, Queues, Binary Trees, Graphs, and their implementations. Related Algorithms, their time complexity and implementation. (Pre-requisite: ITCS 201)

**ECCE 303: COMPUTER ARCHITECTURE AND ORGANIZATION (2-2-3)**

This course introduces the organization and architecture of computer systems hardware; It includes: instruction set principles and examples; Complex and Reduced Instruction sets computers (CISC and RISC); addressing modes; register transfer notation; performance evaluation and processor design; Control Unit, Pipelining, Microprogramming, Memory Hierarchy, Cache and Virtual Memories, Fixed point and floating point arithmetic. (Pre-requisite: ECCE 203)

**ECCE 323: MICROPROCESSORS (2-2-3)**

This is an introductory course to Microprocessors architecture and programming that builds up on the knowledge gained from the Computer architecture and Organization course (ECCE 303). Topics include Assembly language programming, Microprocessor architecture, Instruction type and Addressing modes, Memory Interfacing and synchronization, I/O mapping. Input /Output data transfer (Handshaking, Interrupts, DMA), Programmable Interface devices and Application Examples. (Pre-requisite: ECCE 303)

**ECCE 324: PRINCIPLES OF CONTROL SYSTEMS (2-2-3)**


**ECCE 333: WINDOWS SERVER 2003 ENVIRONMENT (MCSE – 1) (2-2-3)**

This course provides students with the knowledge and skills that are required to manage accounts and resources, maintain server resources, monitor server performance, and
safeguard data in a Microsoft Windows Server 2003 environment. This is the first course in the Systems Administrator and Systems Engineer tracks for Windows Server 2003 and serves as the entry point for other courses in the Windows Server 2003 curriculum. (Prerequisite: ECTE 201)

**ECCE 334: WINDOWS SERVER 2003 NETWORK INFRASTRUCTURE (MCSE – 2) (2-2-3)**

This course ensures that a candidate has a broad base understanding of management and maintenance strategy for Dynamic Host Configuration Protocol (DHCP) and a thorough understanding of Domain Name System (DNS), Windows Internet Naming Service (WINS), Internet Protocol Security (IPsec) and the knowledge and skills necessary to allow, manage and monitor remote access users. (Prerequisite: ECCE 333)

**ECCE 401: COMPUTER SECURITY (3-0-3)**

This course concerns with the protection of computer systems and their data from threats which may compromise integrity, availability, or confidentiality; the focus is on threats of a malicious nature rather than accidental. Topics include: Computer security overview, cryptography, authentication, access control, database security, malicious software, denial of service, intrusion detection, and firewalls, communication protocols and internet security and emerging security issues. (Pre-requisite: ECTE 201)

**ECCE 403: EMBEDDED SYSTEMS (2-2-3)**

This course builds on the knowledge gained form the Microprocessor courses (ECCE 323). It focuses on embedded microprocessor-based systems. It covers Microcontroller hardware architecture. High level programming and real time operating systems for embedded systems. Software and hardware tradeoffs. Memory interfacing. I/O interfacing techniques for devices such as input/output peripherals, sensor/actuator devices, UARTS, digital and analog I/O, timers and interrupters. (Pre-requisite: ECCE 323)

**ECCE 433: WINDOWS SERVER 2003 ACTIVE DIRECTORY & XP PROF. (MCSE – 3) (2-2-3)**

It provides students with the knowledge and skills to successfully plan, implement, and troubleshoot a Microsoft Windows Server 2003 Active Directory infrastructure focusing mainly on a Windows Server 2003 directory service environment, including forest and domain structure & Domain Name System (DNS). It also provides knowledge on the installation and troubleshooting of Windows XP boot process, the installation on new hardware drivers and configurations for a desktop environment. (Prerequisite: ECCE 334)

**ECCE 434: DESIGNING SECURITY FOR NETWORKS (MCSE – 4) (2-2-3)**

This course provides the student with knowledge and skills to design a secure network infrastructure. Topics include are assembling the design team, modelling threats, and analyzing security risks in order to meet business requirements for securing computers in a networked environment. (Prerequisite: ECCE 433)
ECCE 435: INTERNET SECURITY & ACCELERATION (MCSE – 5) (2-2-3)

The Internet Security & Acceleration (ISA) course helps students to gain knowledge on the installation and maintenance of the ISA Server 2004, enabling access to Internet Resources, configuring the ISA Server as a Firewall & configuring Virtual Private network access for remote clients and networks. ISA Server 2004 is the integrated edge security gateway that helps protect IT environments from Internet-based threats while providing users with fast and secure remote access to applications and data. (Prerequisite: ECCE 434)

ECCE 436: SECURITY FOR WINDOWS NETWORKS (MCSE – 6) (2-2-3)

This course helps the student in the planning and the configuration of Authentication and Authorization Strategies, it helps in the troubleshooting of Smart Card Certificates and in Encrypting File System. It provides information on the planning and Implementing of Software Updates, Securing Remote Access, implementing of data transmission security & the Security for Wireless Networks. (Prerequisite: ECCE 435)

ECCE 499: PROJECT IN COMPUTER AND COMMUNICATION ENGINEERING (0-6-3)

Each student is required to select a theoretical and/or a practical problem related to his major area, and works under the supervision of a faculty member. All stages of project development should be emphasized including problem identification, library search, planning, designing and/or building of hardware. Upon completion of the project, the student must submit a final written report outlining the various phases of the project and give an oral presentation. (Prerequisite: IERM 498, ETHC 392, and Completion of 99 Credits)

ECCE 500:

This course introduces the principles of information technology security. It covers the following topics: Introduction to the IT Security, Symmetric-Key Decipherment, Asymmetric-Key Decipherment, Integrity, Authentication, and Key Management.

ECCE 507:

The purpose of this course is to introduce the fundamental concepts in the general area of modeling and simulation. Topics include principles of modeling and simulation, basics of discrete-event simulation, simulation software, mathematical and statistical models, queuing models, simulation design, modelling of simulation data, and output statistics. Concepts are illustrated with examples of simulation of computer systems and networks. ECON 101: Principles of Microeconomics: (3-0-3)
The course introduces microeconomic concepts and analysis: the study of supply and demand and its applications; theory of business firms; and pricing policies of firms under different market structures such as perfect competition, monopoly, monopolistic competition, and oligopoly.

ECON 102: PRINCIPLES OF MACROECONOMICS: (3-0-3)
The study of the determinants of aggregate economic activity, the effects of monetary and fiscal policy on national income, output, and employment. Includes topics of inflation, unemployment, money and banking, trade and finance, economic development.
ECON 201: INTERMEDIATE MICROECONOMIC THEORY: (3-0-3)

Determination of prices and quantities in markets for goods and services. Theories of consumer behaviour, cost structures, factor payments. Firm behaviour in the contest of alternative market structures: perfect competition, monopoly, oligopoly and monopsony. (Prerequisite: ECON 101)

ECON 202: INTERMEDIATE MACROECONOMIC THEORY: (3-0-3)

Roles of goods and markets and financial markets in the determination of national income and inflation; economic growth and business cycles; fiscal and monetary policy. Alternate theories of income, output and price determination. Domestic and international constraints on macroeconomic policy. (Prerequisite: ECON 102)

ECON 301: BUSINESS LAW: (3-0-3)

A general overview of the law of contracts and sales transactions is provided in the first half of this course. The second half of the course then considers such diverse topical content as: consumer protection law, business torts, intellectual property rights, criminal law as applied to business, corporate liability especially product liability based on theories of negligence and strict liability, and finally property law, both real and chattel. (Prerequisite: 3rd or 4th Year Status or Law 101)

ECON 303: INTERNATIONAL ECONOMICS: (3-0-3)

Survey of causes and composition of trade between nations with further consideration of: balance of payments, foreign exchange markets; and international monetary markets and policies. Theory of causes and composition of trade. Topics include: comparative advantage; tariff and non-tariff barriers to trade; economic integration and commercial policy. Financial instruments facilitating international trade. (Prerequisite ECON 202)

ECON 310: ISLAMIC ECONOMICS: (3-0-3)

This course introduces students to fundamental issues encountered in modern Islamic economics in both theory and practice. The teachings of the Shariah in both microeconomics and macroeconomics are explored in depth permitting students to comprehend the multifarious nature of Islamic teaching across a wide spectrum of economic matters. [Prerequisites: CULT 102 or ECON 101 or ECON 102 (any two)

ECON 320: MATHEMATICAL ECONOMICS: (3-0-3)

Application of advanced mathematical concepts to economic analysis. Topics vary but may include: Leontieff input-out analysis and applications of Hamiltonian equations. Special emphasis on construction of dynamic models of economic activity. (Prerequisite: ECON 202 & MATH 104)

ECON 321: ECONOMETRICS: (3-0-3)

Hypothesis testing and prediction with ordinary least squares (OLS) regression. Estimation with violations of classical assumptions. Multicollinearity, heteroscedasticity and serial
correlation problems, dummy variables and model specification. (Prerequisites: STAT 202 & ECON 202)

**ECON 322: LABOR ECONOMICS: (3-0-3)**

An analysis of labor force participation, employment, wage determination, economic stability, investment in human capital. (Prerequisite ECON 201)

**ECON 324: ECONOMIC DEVELOPMENT AND GROWTH: (3-0-3)**

Recent advances in theory and empirical analysis of economic development and growth. Explores empirical findings on economic development, theoretical development models, problems of efficient resource allocation in a growing economy, balanced and unbalanced growth in closed and open economic systems, the role of capital accumulation, and innovation in economic growth. Application of theories and quantitative methods to economic analysis with a view to policy formulation. (Prerequisite ECON 202)

**ECON 410: INDUSTRIAL ORGANIZATION: (3-0-3)**

Economics of alternative market structures focusing particularly on the impact of concentration, economies of scale, advertising and conglomerates on business and society. (Prerequisite ECON 201)

**ECON 420: PUBLIC FINANCE: (3-0-3)**

This course provides a fundamental understanding of the financial management of governmental organizational units and enterprises through an analysis of revenues and expenditures at all levels of government. Special emphasis is placed on the effects of public finance on business finance and personal finance. (Prerequisite: 4th Year Status & ECON 102)

**ECON 421: MONETARY AND FINANCIAL SYSTEMS: (3-0-3)**

Monetary policy choices can strongly affect the development of the economic system and the efficiency of financial intermediaries. The course discusses the fundamentals of monetary policy in the macroeconomic framework characterizing transition economies shedding light on domestic and international aspects of policy actions, evaluation of policies to influence activity and growth, and business cycle analysis. (Prerequisite: BANK 302)

**ECON 422: ECONOMIC ORGANIZATION AND DEVELOPMENT OF THE MIDDLE EAST: (3-0-3)**

An analytical survey of the economic organization of the Middle East. Role of petroleum in transforming the economies of the Arabian Gulf countries, Iran and Libya in terms of the creation of infrastructure and new industry. Special attention to the role of OPEC as a successful cartel in the international petroleum market place and natural resource economics as applied to petroleum in the region. Evaluation of national efforts to diversify away from the petroleum sector. International capital flows into and out of the regions. An overview of non-petroleum exporting Middle East countries with reference to population and land resources, agricultural industries, transportation, trade and finance. Prognosis of economic development of the region and forecast of alternative economic futures for the countries of the Gulf. (Prerequisite: ECON 324)
**ECON 423: INTERNATIONAL TRADE THEORY, POLICY & REGULATION: (3-0-3)**

A survey course in trends in the composition of world trade. Topics include: commodity price volatility; value-added of agricultural and manufactured goods; tariff and non-tariff barriers to trade; economic integration and commercial policy; and trade involving intellectual property rights. Financial instruments facilitating international trade. Special emphasis on recent advances in theory and empirical analysis of international trade and international trade law and regulation through the World Trade Organization. (Prerequisite: ECON 303)

**ECON 499: PROJECT IN ECONOMICS: (0-6-3)**

A structured, pre-approved project in economics ordinarily involving (1) research on a particular topic in economics or (2) reporting on field-work in an economics organization. (Prerequisite: BFRM 498)

**ECON 520: MANAGERIAL ECONOMICS: (3-0-3)**

This course is designed to provide participants with a basic understanding of microeconomic theory that can be used to understand behavior (in markets and organizations) to make effective managerial decisions. Application of key economic concepts such as market demand, market supply, market equilibrium, marginal analysis, production, costs, revenue, profit, and market structure constitute the core material of the course. The course seeks to integrate various principles and concepts from different fields of economics with typical problems of managerial decision-making and policy formulation in business organizations whether in a local or global context. Quantitative techniques and managerial economic analysis tools will be integrated within the course for the purpose of providing students the ability to solve real world situation and as a problem solving tool in their organization.

**ECON 530: ECONOMIC THEORY: (3-0-3)**

This course covers advanced theoretical concepts in micro and macroeconomics. It affords students the opportunity to gain insight into the main features and complexities of economic analysis by integrating micro and macroeconomic theories. Students gain a holistic view of the interaction of consumers, producers, markets and governments through the prism of prices, markets and exchanges. The effectiveness of economic policy as a means to influence key indicators of the performance of economies, at various stages of development, is also examined. (Prerequisite: ECON520)

**ECON 595: PROJECT DISSERTATION IN ECONOMICS: (0-12-6)**

The student conducts a study on a topic in the field of economics under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: 21 core credits including MAGT 550)

**ECON 599: DISSERTATION IN ECONOMICS: (0-24-12)**

A structured supervised in-depth study on a pre-approved topic in the field of economics can entail one of two methodologies: (1) a literature-focused study which aims to critically discuss the literature within a specified topic area or (2) a research focused study which
aims to draw on practical data to assess critically a specified area or topic. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defence. (Prerequisite: 21 core credits including MAGT 550).

ECTE 201: DATA NETWORKS (3- 0- 3)

This course introduces data communication networking. It includes: foundational principles of computer networks, architecture of data communication systems, OSI model, protocols and mechanisms used in the TCP/IP protocol suite, including the operation of both wide-area and local-area networks (Pre-requisite: ITCS 101)

ECTE 224: SIGNALS AND SYSTEMS (2- 2- 3)

This course gives an overview of continuous-time signals and systems. It covers: Basic characteristics of signals, Fourier analysis of continuous-time signals, properties of Linear Time-Invariant (LTI) systems, The Convolution integral, Impulse and step responses of LTI systems, concept of Transfer Function including basic properties of Laplace, and applications of signals and systems concepts in control and signal processing. (Pre-requisites: ECCE 201, ECCE 204)

ECTE 314: COMMUNICATION SYSTEMS I (2 -2 - 3)

This course introduces and emphasizes essential analytical tools and theories of communication systems. It covers mainly analog communication: analog modulation (AM, FM, PM); frequency division multiplexing and filtering; A/D and D/A conversions (sampling theory, PAM, Quantization, PCM, and Delta modulation). (Pre-requisite: ECTE 224)

ECTE 324: COMMUNICATION SYSTEMS II (2- 2- 3)

This course builds on the knowledge gained from the previous communication course (ECTE 314). It focuses on digital communication: digital modulation (ASK, FSK, PSK, QAM); transmission of digital data over baseband channel (line coding, block coding, scrambling); error detection and correction (hamming distance, linear block codes, cyclic codes, checksum, and forward error correction). (Pre-requisite: ECTE 314)

ECTE 333: INTERCONNECTING NETWORK DEVICES I (CCNA – 1) (2-2-3)

This course focuses on providing the skills and knowledge necessary to install, operate, and troubleshoot a small branch office Enterprise network, including configuring a switch, a router, and connecting to a WAN and implementing network security. A Student should be able to complete configuration and implementation of a small branch office network under supervision. (Prerequisite: ECTE 201)

ECTE 334: INTERCONNECTING NETWORK DEVICES II (CCNA – 2) (2-2-3)

This course focuses on providing the skills and knowledge necessary to install, operate, and troubleshoot a small to medium-size branch office Enterprise network, including implementation of several routing protocols and ACL (Access Control List) & Address Space Management. (Prerequisite: ECTE 333)
ECTE 410: MULTIMEDIA COMMUNICATIONS OVERVIEW (3-0-3)

This course will consider each part of a multimedia application, i.e. voice, video and data individually. Covering different issues related to: general behaviours, format, representation, encoding-decoding techniques and telecommunication media requirements. (Prerequisite: ECTE 201)

ECTE 421: NETWORK DESIGN AND SECURITY (2-2-3)

This course provides an overall scheme for designing secure multimedia networks. It covers the following concepts: application requirements analysis, switching technology, traffic modeling, QoS, network security. (Pre-requisite: ECCE 401)

ECTE 424: WIRELESS COMMUNICATIONS (2-2-3)

This course introduces Modern wireless communication principles and techniques. It focuses on Cellular communication fundamentals (design, interference and capacity, trunking and traffic models, air interface, propagation models and mechanisms, large/small scale fading, diversity techniques); spread spectrum coding; current and future wireless systems and standards, and an introduction to optical communication. (Pre-requisite: ECTE 324)

ECTE 433: BUILDING SCALABLE INTERNETWORKS I (CCNP – 1) (2-2-3)

In this course, students will learn how to create an efficient and expandable enterprise network by installing, configuring, monitoring, and troubleshooting network infrastructure equipment (especially routers such as Cisco ISRs) according to the Campus Infrastructure module in the Enterprise Composite Network model. The routed network includes the most commonly used and emerging IP routing protocols. (Prerequisite: ECTE 334)

ECTE 434: BUILDING SCALABLE INTERNETWORKS II (CCNP – 2) (2-2-3)

The CCNP -2 course gives the student a more in-depth knowledge into implementing multicast, implementing of IP v6, the IS-IS protocol, manipulating of routing updates, and EIGRP and OSPF. (Prerequisite: ECTE 433)

ECTE 450: DIGITAL SIGNAL PROCESSING (2-2-3)

This course presents the theory and practice of digital signal processing. It covers: Z-transform applications to signal processing; discrete Fourier transform: properties, applications and computation methods with emphasis on fast Fourier transform; time and frequency analysis of discrete-time signals and systems; analysis and design of digital filters; sampling and reconstruction of signals; and DSP applications. The course concludes with a brief introduction to 2-D signal (image) processing. (Pre-requisite: ECTE 224)

ECTE 499: PROJECT IN MOBILE AND NETWORK ENGINEERING (0-6-3)

Each student is required to select a theoretical and/or a practical problem related to his major area, and works under the supervision of a faculty member. All stages of project development should be emphasized including problem identification, library search, planning, designing and/or building of equipment. Upon completion of the project, the
student must submit a final written report outlining the various phases of the project and give an oral presentation. (Prerequisite: IERM 498, ETHC 392, and Completion of 99 Credits)

ECTE 531:

This course gives an overview of the networking in general and concentrates on the purposes and protocols involved in the upper IP reference model layers. It covers in details the following layers: Network, Transport and Application.

ECTE 535:

This course first discusses various concepts involved in broadband networks including multimedia components coding and compression, switching techniques, queuing and delay analysis, quality of service and resource allocation. The second part of the course gives an overview of multimedia networks including: Telephony Networks, Optical Networks, VoIP and Enterprise Networks, and Mobile ad-hoc networks.

ECTE 537:

This course covers advanced topics in IT security spanning Network security including: Security at the Application Layer, Security at the Transport Layer, Security at the Network Layer, and general aspects in Mobile ad-hoc networks security.

EMSE 4197: SPECIAL TOPICS: QUANTITATIVE METHODS IN ENGINEERING MANAGEMENT: (3-0-3)

Provides mathematical foundation for analysis of problems in engineering management and systems engineering, including optimization and other analytical tools.

EMSE 6001: THE MANAGEMENT OF TECHNICAL ORGANIZATIONS: (3-0-3)

The practice of management as applied within technical organizations. Includes history of the tradition and current effective practices, research findings, and case studies, with objectives of enhanced understanding of external and internal factors influencing organizational performance and leadership requirements.

EMSE 6005: ORGANIZATIONAL BEHAVIOR FOR THE ENGINEERING MANAGER: (3-0-3)

The behavior of individuals and groups in the context of technical organizations, focusing on relationships and interactions within the organizations operating activities. Individual and group development and motivation. Organizational structures and cultures.

EMSE 6020: DECISION MAKING WITH UNCERTAINTY: (3-0-3)

Problem formulation. Concepts and techniques used in analyzing complex decision problems. Modeling decision problems using decision trees, probability models, multi objective models and utility theory.
EMSE 6026: TECHNICAL ENTERPRISES: (3-0-3)

Essential features for a technology-based companies from the entrepreneur's point of view. Team preparation of a simulated business plan for a technology-based company. Designed for those working in technical firms and for government personnel who depend on technical firms as suppliers.

EMSE 6035: MARKETING OF TECHNOLOGY: (3-0-3)

Analysis of industrial marketing process and functions, providing concepts and tools for engineering managers to market high technology products and services.

EMSE 6410: SURVEY OF FINANCE AND ENGINEERING ECONOMICS: (3-0-3)

Survey of material relevant to financial decision making for engineering activity. Includes traditional engineering economy topics; fundamental of accounting; and financial planning, budgeting and estimating applicable to the management of technical organizations.

EMSE 6505: KNOWLEDGE MANAGEMENT I: (3-0-3)

The foundations of knowledge management, including cultural issues, technology applications, organizational concepts and processes, management aspects and decision support systems. Case Studies.

EMSE 6770: TECHNIQUES OF RISK ANALYSIS AND MANAGEMENT: (3-0-3)

Topics and models in current risk analysis; modern applications of risk-based planning and risk management; use of quantitative methods in risk analysis.

EMSE 6790: LOGISTICS PLANNING: (3-0-3)

Quantitative methods in model building for logistics systems, including organization, procurement, transportation, inventory, maintenance and their interrelationships. Stresses applications.

EMSE 6801: SYSTEMS ENGINEERING I: (3-0-3)

System approach to the architecting and engineering of large-scale systems; elements of systems engineering; methods and standards; computer tools that support systems and software engineering; trends and directions; the integrative nature of systems engineering.

EMSE 6820: PROGRAM AND PROJECT MANAGEMENT: (3-0-3)

Problems in managing projects; project management as planning, organizing, directing and monitoring; project and corporate organizations; duties and responsibilities; the project plan: schedule, cost, earned-value and situation analysis; leadership; team building; conflict management; meetings, presentations and proposals.
EMSE 6850: QUANTITATIVE MODELS IN SYSTEMS ENGINEERING: (3-0-3)

Quantitative modelling techniques and their application to decision making in systems engineering. Linear, integer, and nonlinear optimization models. Stochastic models: inventory control, queuing systems, and regression analysis. Elements of Monte Carlo and discrete event system simulation.

EMSE 6995: RESEARCH: (0-12-6)

The student conducts a study on a topic in the field of engineering management under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: EMSE 6992)

ENGL 050: ORIENTATION ENGLISH: (0-0-6)

A basic integrated English language course which aims to develop the students’ basic language skills and focuses mainly on business communication.

ENGL 101: ACADEMIC ENGLISH I: (3-0-3)

A course to develop the students’ ability to use the language in business-related situations. It offers practice in reading comprehension, grammar, vocabulary-building and writing a single paragraph on themes related to business management, banking and information technology. (Prerequisite ENGL 050 or exemption exam)

ENGL 102: ACADEMIC ENGLISH II: (3-0-3)

A continuation of ENGL 101, which further develops the students’ skills in reading and writing based on business-related topics. (Prerequisite ENGL 101)

ENGL 201: ACADEMIC ENGLISH III: (3-0-3)

The third in the series of integrated language courses to develop the students’ proficiency in using the language in business communication. Particular emphasis is placed on developing the students’ ability to read longer business-related texts. (Prerequisite ENGL 102)

ENGL 202: ACADEMIC ENGLISH IV: (3-0-3)

The fourth course in the series. The writing component offers practice in the conventions and style of business communications of various types including memos, letters and short reports. (Prerequisite ENGL 201)

ENGL 211: ENGLISH FOR HEALTH SCIENCES I (3-0-3)

The first in the series of integrated language courses, which develops and improves students’ reading skills in English, whilst increasing medical vocabulary through selected readings based on physiotherapy-related topics. (Prerequisite ENGL 102)
ENGL 212: English for health sciences II (3-0-3)

The second in the series of integrated language courses, which further develops and
ENGL 215: READINGS IN LITERATURE I (3-0-3)

The course introduces students to English literature and focuses on reading and discussion of selected short stories. It aims at familiarizing students with the nature of literature through the study of character, plot, theme, point of view, style, and figurative language. (Prerequisite: ENGL 201)

ENGL 216: READINGS IN LITERATURE II (3-0-3)

After being introduced to short fiction in ENGL 215, the students are required to do further readings not only in works of fiction but also in selected works of poetry and drama. The aim of the course is to develop extensive reading skills and encourage a better understanding and appreciation of literature through the study of character, plot, theme, setting, structure, style, and figurative language. (Prerequisite: ENGL 215)

ENGL 221: INTRODUCTION TO TRANSLATION (3-0-3)

The course introduces students to basic techniques of translation and develops their skill in translating a variety of short written texts from English to Arabic and vice versa. Materials include short descriptive passages, letters, announcements, advertisements, newspaper news items and readers’ views. Typical problems involved in such translation are highlighted and discussed. (Prerequisite: ENGL 201)

ETHC 391: ETHICS AND PROFESSIONAL PRACTICE IN BUSINESS: (3-0-3)

This course provides students with a theoretical foundation of what Business Ethics is all about, enabling them to identify and analyze current ethical issues and dilemmas facing business practitioners in real world contexts involving multiple stakeholders. In addition, through ample case studies, the course attempts to inculcate into students key ethical principles, standards and ways in which business practitioners address moral problems that commonly arise in the business world. The course provides ample opportunity for students to hone skills in critical thinking and ethical reasoning as essential components of a manager’s decision-making process. The course also highlights the cost to business of unethical behavior and provides a comprehensive overview of corporate social responsibility (Prerequisite: Completion of at least 66 credits).

ETHC 391: ETHICS AND PROFESSIONAL PRACTICE IN IT AND ENGINEERING: (3-0-3)

The course explores and discusses key ethical, legal and professional issues and responsibilities in Computing and other related fields. It examines emergent technologies within frameworks that highlight their ethical, legal and social implications. Topics include privacy, confidentiality, security, intellectual property, software piracy, cybercrime, digital identity, software reliability, risk and safety and professional standards of conduct and codes of ethics. Through a unique blend of theory and application, the students critically examine current and relevant research and particular case studies to enhance their understanding of the subject. The students learn that careers in IT and Engineering are not purely technical professions but ones with moral, legal and social implications that impact the everyday lives of professionals.
ETHC 393: ETHICS & PROFESSIONAL PRACTICE IN MASS COMMUNICATION & PUBLIC RELATIONS (3 - 0 - 3)

This course provides students with a theoretical foundation that enables them to identify and analyze current ethical issues in the media. It addresses questions such as: Is it necessary for professional journalists to be tied by moral ethics? How much information should the media provide about the private lives of public figures? Through analysis and discussion of case studies it deals with the role of the media and journalists in society; the meaning of justice; the reciprocity gene; free speech and how blogs, opinion-oriented media, social media and editorials relate to freedom of the press. (Prerequisite MASC 202)

ETHC 394: Ethics & Professional Practice in Interior Design (3 - 0 - 3)

The purpose of the course is to introduce ethical dimension of management to prospective professionals in the field of Interior Design & Architecture. Emphasis is on applying ethical standards to a range of business practices that the practitioner might likely encounter in the business of architecture and interior design. Ethical aspects of doing business impinge on a range of services provided by architectural and design professionals including but not limited to: business management, marketing, contracts, negotiations, design cost analysis/control and human resources. As part of the learning process students will be expected to participate in class discussion as well as to analyze cases designed to develop critical thinking skills in ethics, (Prerequisite: INTD 310)
**FINC 210: FINANCIAL MANAGEMENT: (3-0-3)**

This course imparts a fundamental understanding of the functions of finance in the contexts of: the legal and tax environments and the roles of financial markets. A vigorous introduction to compound interest, future and present value, and theories of financial valuation and financial analysis and planning is provided. (Prerequisite: ACCT101)

**FINC 310: ESSENTIALS OF CORPORATE FINANCE: (3-0-3)**

This course explores in depth the concept of cost of capital: how it is used in financial decision-making and how costs of individual components of the capital structure are brought together to form a weighted average cost of capital. Choice of capital structure and working capital policy are a primary focus of this course. Students examine how to manage current (short term) assets and current (short term) liabilities and obtain exposure to additional issues including: cash flow estimation, incorporating risk into the capital budgeting decision and international capital budgeting decision-making methods. Students gain perspective on how financial managers can help maximize their firms’ values. (Prerequisite: FINC 210)

**FINC 320: INTERNATIONAL FINANCE: (3-0-3)**

International money and capital markets. Currency options, futures and swaps as means for currency risk management. Valuation and portfolio analysis of international stocks and bonds. Foreign direct investment and political risk management. Project finance and raising of international capital. Financing and investment decisions of multinational corporations. (Prerequisite: FINC 310)

**FINC 321 INSURANCE AND REINSURANCE (3-0-3)**

This course introduces the student to the principles and applications of insurance and reinsurance. After finishing this course the student should demonstrate a strong basic understanding of property, liability, automobile insurance, introduction to reinsurance, methods and types of reinsurance, and functions of reinsurance. Students should grasp the main types of reinsurance and their contribution to and importance in maintaining a stable insurance industry. (Pre-requisite FINC 310)

**FINC 327 PERSONAL FINANCE (3-0-3)**

This course is designed to introduce the student to the concepts, tools, and applications of personal finance and investments. A variety of methods will be used to enhance the learning experience, including, among other things, web resources and interactive financial planning software. A focus will be put on retirement plans, personal budget, and auto and housing decisions, in addition to, health, life and property insurance. (Pre-requisite FINC 210)

**FINC 328: REAL ESTATE FINANCE: (3-0-3)**

This course explores in depth real estate institutions and markets, real estate mathematics, mortgage instruments, investments in real estate, and underwriting and valuation of real estate. Special consideration is given to trends in real estate finance in GCC countries. (Prerequisite: FINC 210)
FINC 410: CREDIT ANALYSIS AND LENDING: (3-0-3)

This course imparts a fundamental understanding of the credit risk analysis process and then proceeds to cover financial statement analysis, including ratio and cash flow analysis, to facilitate better credit-related decisions. Various non-financial factors -- the business plan, industry/sector performance and senior management issues -- that often affect creditworthiness receive ancillary attention. (Prerequisite: FINC 310)

FINC 421: INVESTMENT: (3-0-3)

A primer on how to manage money, this course provides students with a survey of securities markets and modern investment instruments available in financial markets including stocks, bonds, convertibles, warrants, futures and options. The course also introduces students to techniques of asset valuation and market efficiency hypotheses. Students gain insight concerning how to evaluate current investments and future opportunities and acquire the skill and know-how necessary to be intelligent investors. (Prerequisite: FINC310)

FINC427 DERIVATIVE SECURITIES: (3-0-3)

An advanced primer on futures contracts and options exploring a wide variety of complex derivatives such as straddles and options of stock index futures. (Prerequisite: FINC 310)

FINC 430 RISK MANAGEMENT (2-2-3)

The course offers an introduction into the evolving and expanding practice of financial risk management. Risk management is a complex process of identifying, measuring, and controlling risk exposure. The course addresses how to control for market and credit risks. Liquidity and operational risks are discussed. Topics include value at risk, Monte Carlo simulation, scenario analysis, stress testing, credit value at risk, and credit derivatives. (Pre-requisite FINC 310)

FINC 431: PORTFOLIO MANAGEMENT: (3-0-3)

This course explores the theory and practice of portfolio management and valuation. The roles of computer technology and electronic trading are also investigated. (Prerequisite FINC 310)

FINC 432 ISLAMIC CAPITAL MARKETS AND INSTRUMENTS (3-0-3)

The course aims to introduce students to the main principles of Islamic capital markets and instruments and to analyses of the relationship between Islamic capital markets and instruments and conventional Islamic capital markets and instruments in the Islamic world and the Middle East in particular. The course offers the students to understand the theories and practice of Islamic capital markets and explore their implications on investment and funding corporations and projects to support development in Muslim societies. In particular, the students need to be familiar with the essential requirements of different Islamic modes of business, thus enabling them to appreciate the distinctive characteristics of a capital market environment that adhered to shariah principles. (Pre-requisite bank 330)

FINC 499: Project in Finance: (0-6-3)

A structured, pre-approved project in finance ordinarily involving (1) research on a particular topic in finance or (2) reporting on field-work in a finance organization. (Prerequisite: BFRM 498)
FINC 500: FINANCE: (2-0-2)

This course explores basic concepts of finance and provides students perspective on how financial managers maximize firm’s values. Students are introduced to core concepts in finance such as the time value of money and cost of capital.

FINC 501: FINANCIAL MANAGEMENT: (3-0-3)

Combines principles of management of the firm, operations of money and capital markets, discounted cash flows, risk and asset valuation with modern capital structure theories, leasing, working capital policies and mergers and acquisitions. (Prerequisite: FINC 500 or equivalent)

FINC 502: FINANCIAL ANALYSIS: (3-0-3)

This course is concerned primarily with the valuation of companies. It examines the role of financial statement analysis in the evaluation of the firm and the prediction of its future economic condition. The major emphasis is on the use and interpretation of financial statement information for performance evaluation, equity investment decisions and credit analysis. Topics covered include traditional ratio analysis techniques and accounting analysis. Attention is then turned to the use of financial statement analysis in specific decision contexts (e.g., equity valuation, financial distress and bankruptcy prediction). (Prerequisite: FINC 501).

FINC 505: CAPITAL BUDGETING AND PROJECT EVALUATION: (3-0-3)

The course focuses on using capital budgeting techniques to evaluate projects including payback period, net present value, and internal rate of return. Case studies concern the role of financial administration in managing capital costs, capital budgeting, shareholder equity, corporate capital structure, and mergers and acquisitions among other topics. (Prerequisite: FINC 501).

FINC 506: INTERNATIONAL FINANCE: (3-0-3)

This course is concerned primarily with a revision of the international monetary environment and financial planning for corporations with overseas operations. It focuses on analysis of the effects of international financial planning on such factors as exchange rate fluctuations, currency restrictions and tax regulations. It gives an examination of financial aspects of multinational business, including foreign investments, trade and transfer of funds. Currency options, futures and swaps as means for currency risk management are also given details. (Prerequisite: FINC 501).

FINC 507: FINANCIAL MODELING AND OPTIMIZATION: (3-0-3)

The objective of the course is to develop skills in designing and constructing financial models for analysing a variety of decision problems facing today's financial managers and professionals. We will use a discounted cash flow valuation approach in analysing decisions about the courses of actions for a company. A structural approach will also be used for valuation by incorporating all operational and financial aspects of the firm into an integrated pro-forma statement. Students will learn how to use a variety of spreadsheet tools and techniques, such as financial and statistical command functions, what-if scenarios, one-and
two-way input tables, pivot tables, probability analysis, optimization, Monte Carlo and simulations in this course. (Prerequisite: FINC 501).

**FINC 508 INVESTMENT ANALYSES AND PORTFOLIO MANAGEMENT: (3-0-3):**

The course is designed to study security markets and security analyses for portfolio planning. The first half of the course examines investment analysis from the standpoint of individual investors. Topics include investment alternatives, security markets, trading procedures, bond valuation, stock valuation, and market indices. The second part of the course examines investment portfolio formation, management and evaluation. Topics include efficient markets, portfolio theory, capital market theory, portfolio performance evaluation, and the use of derivative securities. (Prerequisite: FINC 501).

**FINC 595: PROJECT DISSERTATION IN FINANCE: (0-12-6)**

The student conducts a study on a topic in the field of finance under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: 21 core credits including MAGT 550)

**FINC 599: DISSERTATION IN FINANCE: (0-24-12)**

A structured supervised in-depth study on a pre-approved topic in the field of finance can entail one of two methodologies: (1) a literature-focused study which aims to critically discuss the literature within a specified topic area or (2) a research focused study which aims to draw on practical data to assess critically a specified area or topic. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defence. (Prerequisite: 21 core credits including MAGT 550).

**FREN 101: INTRODUCTION TO FRENCH I: (3-0-3)**

A French language primer, first in a series of two elementary courses, offering a familiarization with its components (pronunciation, reading and listening comprehension, writing and basic rules of grammar). Students develop competence in understanding and expression of basic everyday language by holding conversation in French with others.

**FREN 102: INTRODUCTION TO FRENCH II: (3-0-3)**

A French language primer, second in a series of two elementary courses, offering a detailed introduction to structure of French tenses paying particular attention to irregular verbs in everyday use. Students develop greater facility in reading, listening comprehension, writing and conversation. (Prerequisite: FREN 101)
GERM 101: GERMAN LANGUAGE AND CULTURE I (3-0-3)

The course introduces the German language to students and promotes a general understanding of cultures and traditions in the German speaking regions of Central Europe. It is designed to enable students to communicate meaningfully in German on basic topics dealing with everyday events and situations. Students develop skills in reading, listening, speaking, and writing, and attain mastery of the basic structures (grammar) of the German language.

GERM 102: GERMAN LANGUAGE AND CULTURE II (3-0-3)

A continuation of GERM 101 that provides the students with the opportunity not only to develop an ability to communicate in German on a variety of subjects but also to gain awareness of contemporary German society and the cultural traditions which inform it. (Prerequisite: GERM 101)

GDES 332- PATTERN DESIGN (0-6-3)

Application of flat patterning theories and techniques to create original apparel and accessory products using industry state-of-the-art patterning software.

GDES 340- DIGITAL ART (0-6-3)

The course involves the exploration of a sequence of computer imaging concepts that begins with an introduction to object and bit map image making. These types of images are then used in context of computer animation that is output as video or run on the computer. The course concludes with an introduction to hypermedia authoring in which the imaging and animation techniques explored earlier are applied to the creation of computer documents that also incorporate sound and interactivity.

HIST 101: MODERN HISTORY OF THE MIDDLE EAST & NORTH AFRICA: (3-0-3)

This course overviews the political and economic history of the Middle East and North Africa from the Nineteenth Century to the present with an emphasis on the historical origins of the contemporary problems confronting the region. After examining the political map of the Middle East and North Africa after the imposition of European colonialism, the post-colonial political challenges that these newly independent states faced are analysed. The latter part of the course explores major contemporary issues such as: the rise of OPEC, the Arab-Israeli conflict; the Iran-Iraq war and the intervention of the United States in the region.

HIST 121 MODERN HISTORY OF BAHRAIN: (3-0-3)

This course focuses on the importance of the strategic location of the Kingdom of Bahrain; Bahrain history since the early 1600; Al-Utooobs and the rise of Zubara; the beginning of Al-Khalifa era; Bahrain under the British protection & independence and the building of the modern state; modernization of the political administrative and legal systems; economic and social development in Bahrain.
HUMR 101: PRINCIPLES OF HUMAN RIGHTS (3-0-3)

The course covers the basic principles of human rights through the definition of human rights and their scope with a focus on International Conventions of Human Rights, which includes the documents such as United Nations Charter, Universal Declaration of Human Rights, International Conveninet for Civil and Political Rights, International Conveninet for Economic, Social and Cultural Rights and Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment. It also covers protection mechanism and institutional administration of rights and general freedoms in the Kingdom of Bahrain.

IDRM 498: RESEARCH METHODS IN INTERIOR DESIGN (3-0-3)

This is a foundation course for INTD 499 Final Design Project. A thorough study of the actual site proposed should include the followings; the surrounding buildings and context, orientation and environment, and access and outlets. Students explore building regulations that have to be implemented in the project design. Students achieve an analytical research study about a diversity of similar case studies and their context. At the end of the semester, students should present their project to a jury of professional designers and academics. (Prerequisite: INTD 310)

IERM 498: RESEARCH METHODS IN IT AND ENGINEERING (3-0-3)

The course introduces the essential aspects of designing, supporting, and conducting a research project. It enables students to develop capacity to conduct small, simple research projects while at the university. The course spans multiple elements including time management, writing and presentation skills, literature search and general considerations for experiment design and planning. (Prerequisite: Completion of 90 Credits)

INTD 100: ENGINEERING DRAWING (0-6-3)

This course is an introduction to manual architectural drawing. The objective of the course is to develop the necessary manual dexterity and knowledge of drafting fundamentals and to create orthographic and pictorial technical drawings freehand and using equipment. Topics covered include: drawing instruments, lettering techniques, line work, scale drawings, simple geometric constructions and dimensioning.

INTD 102: INTRODUCTION TO DESIGN (0-6-3)

This course introduces students to the field of design through an introduction to general ideas and concepts of design theories and basic design principles in several simple building projects.

INTD 103: FREEHAND DRAWING (0-6-3)

This course aims at imparting sketching skills as a form of expression and thinking in the design process.
INTD 200: DESIGN THEORY (3-0-3)
This course surveys major philosophies and trends that have determined different directions and movements in the field of interior design and architecture presents theories of the design of architectural interiors and related components. Design determinants also receive attention including behavioural environmental and technological factors.

INTD 203: DESIGN WORKSHOP (0-6-3)
This course focuses on model-making for a variety of projects, whether interior or exterior in addition to different interior design compositions. (Prerequisite: INTD102).

INTD 204: DESIGN DRAWING I (0-6-3)
A course in engineering drawing involving presentation and projection, techniques of representation of 3D including orthogonal (plans, sections and elevations) and praline (axonometric and isometrics). Drawing straight and curved lines, orthographic projections, sectional and pictorial views, architectural conventions for the creation of simple architectural plans, elevations and sections, and title blocks will all be studied.(Prerequisite: INTD100).

INTD 206: HISTORY OF ART & DESIGN (3-0-3)
This course surveys the development of world architecture and art from classical to present times. It will discuss interior spaces, design philosophy, and interior elements in architectural and sociological context. Students study the record of human achievement expressed in the built environment. This course strives to impart to students a critical comprehension of historic styles and the impact that the latter have on contemporary design solutions.

INTD 208: VISUAL TRAINING (0-6-3)
This course aims to develop aesthetic expression and judgment in design and architecture through the creative use of art elements and design principles. (Prerequisite: INTD103).

INTD 209: COLOR THEORY & PRACTICE (3-0-3)
This course develops the students’ sophisticated sense of the theories of colour, its properties, psychology, and impact within a designed interior. The elements of light, space, harmony, and assimilation as they pertain to the use of colour in design are covered through lectures, in-class demonstrations, and class exercises. An understanding of the use of colour in interior spaces will help the students in their own colour application projects.

INTD 211: DESIGN DRAWING II (1-4-3)
This course introduces students to systems of perspective as a means of creating the illusion of 3-dimensional space on a 2-dimensional surface. Using 1-, 2-, and 3-point perspective, students will learn to effectively render the illusion of space. Students will learn a variety of creative architectural drawing techniques of presenting architectural drawings including but not limited to: pencil techniques, ink and colour rendering. (Prerequisite: INTD 204).
INTD 300: DESIGN STUDIO I (1-4-3)

This studio course continues the study of interior design through research, analysis, programming, conceptualization and design of the interior environment. Projects include exercises in spatial organization, anthropometrics and circulation on an increasingly complex scale. (Prerequisite: INTD211).

INTD 303: MATERIALS & APPLICATION IN DESIGN (3-0-3)

This course consists of a study of interior finishing materials with a focus on sustainability characteristics, estimating, fabrication and installation.

INTD 304: LIGHTING & ACOUSTICS (3-0-3)

This course explores ambient interior systems such as lighting and acoustics. It also includes basic principles of illumination, exploration of light sources, identification, terminology, analysis, calculations, graphic representation and documentation to effectively communicate lighting design and acoustics.

INTD 305: COMPUTER APPLICATION IN DESIGN I (1-4-3)

An introduction to the CAD world and its 2D implementation in the architectural field. Students learn the tools and techniques to translate their hand drawn design sketches into digital format, from basic conceptual diagrams to fully loaded architectural drawings, meeting the high standards of design-firm expectations. (Prerequisite: INTD 204).

INTD 306: BUILDING SYSTEMS & INTERIOR CODES (3-0-3)

This course examines various interior assemblies on non-load-bearing and, load-bearing walls, floors, stairs, elevators, fireplaces, ceilings, doors, interior windows, frames, millwork, and fire-related construction. Emphasis is placed on building codes, construction materials, visual qualities, technical characteristics and applications of the common materials and finishes: floor coverings, wall coverings, textiles, ceiling, and sustainable materials. Related fire, health, and safety codes, as well as maintenance and life cycle costs, receive attention. (Prerequisite: INTD 303)

INTD 307: LANDSCAPE DESIGN (1-4-3)

After reviewing history and theories of landscape architecture, this course introduces students to the design of the outdoor environment covering residential and small scale landscape developments. Project program, site selection and analysis, concept generation and design schemes feature prominently. (Prerequisite: INTD 300)

INTD 308: COMPUTER APPLICATION IN DESIGN II (1-4-3)

The course enables students to increase their productivity by using complex objects (i.e. poly-lines, regions, and multi-lines), reference and image files. It also covers complex view ports and pen styles for plotting, basic customization for AutoCAD, and an introduction to 3D modelling. (Prerequisite: INTD 305).
INTD 310: DESIGN STUDIO II (1-4-3)

This is a design studio course with emphasis on the development and presentation of residential design projects. (Prerequisite: INTD300).

INTD 330: STAGE PLANNING (0-6-3)

This course explains the history and development of stage design and the exploration of the design process. It also explains project work in the realization of stage designs through drafting, rendering, and model-building.

INTD 334: COMICS & ANIMATION (0-6-3)

This course imparts animation techniques to students with the training and practical experience necessary for independent operation of animation equipment and the independent production of animated film. A variety of traditional and experimental techniques are explored in depth. These techniques include animation stand as well as three-dimensional animation execution.

INTD 336: FINE ART STUDIO (0-6-3)

This course explores the elements of visual language, their nature, functions, and relationships in painting, sculpture, and architecture. Focus is on the development and application of critical thinking skills.

INTD 337: HISTORIC RESTORATION (0-6-3)

This course is an examination of the contemporary theories, techniques and practices of the urban and architectural historic preservation and their applicability to regional and local preservation problems. The course also includes a discussion of historical, legal, political, financial and programmatic aspects.

INTD 338: PHOTOSHOP (0-6-3)

This course shows you how to use Adobe Photoshop to perform many different image processing techniques. In this course, you will learn to use several tools for selecting parts of images, and will move, duplicate and resize images. You will learn to use layers, layer effects, filters, lighting and texture effects, painting and blending, and colour modification. Also, you will learn to create images of different formats for different applications.

INTD 341: ISLAMIC ART & DESIGN (0-6-3)

This course is an analytical study of the history of Islamic art and architecture, particularly its evolution and development of graphic and architectural form under the influence of Islamic culture.

INTD 400: DESIGN STUDIO III (1-4-3)

This course deals with design problems involving hospitality and entertainment spaces: restaurants, hotels, shopping malls, convention centres and historic interiors. Emphasis is
placed on space planning, sequencing of spaces, fixture design and details, signage and logo design, materials and texture, and furnishings and equipment. Projects & assignments include a broad range of interiors for specialized clients. (Prerequisite: INTD310).

**INTD 405: COMPUTER APPLICATION IN DESIGN III (0-6-3)**

The course provides students with substantial practice in the creation of 3-dimensional, object-oriented models using 3D Software. (Prerequisite: INTD 308).

**INTD 407: PORTFOLIO DEVELOPMENT (0-6-3)**

This course provides the opportunity to create a portfolio of projects completed in previous interior design courses. Organization, flow, readability, and digital format are among the discussed topics. (Prerequisite: INTD 400)

**INTD 409: DRAWINGS & SPECIFICATIONS I (1-4-3)**

Exploring methodology of developing a comprehensive set of construction documents for different interior design projects, this course emphasizes drawing and document standards for plans, elevations, schedules, details and specifications in accordance with professional practice. (Prerequisite: INTD 306)

**INTD 410: DESIGN STUDIO IV (1-4-3)**

The main objective of this course is to expose students to complex interior design situations where they have to come up with innovative solutions dealing with: detailed structural solutions, built in components and lighting and customized furniture. (Prerequisite: INTD400).

**INTD 411- DRAWINGS & SPECIFICATION II (0-6-3)**

The course introduces interior detailing and architectural drafting. Special emphasis will be made on sketching, measuring and documentation of buildings. Students practice making a set of working drawings of a structural system built with concrete or steel or masonry. The course also includes drafting skills of some interior elements including; doors, windows, staircases, built-in cupboards and counters or specific pieces of furniture. Students acquire the knowledge of collaborating with other professionals to create precise and accurate detailed working drawings. Prerequisite: INTD 409

**INTD 434: RESEARCH METHODOLOGY (3-0-3)**

This course aims at developing an understanding of and an appreciation for using a structured design methodology. Students will have a better understanding of the wide range of aspects that must be effectively dealt with in designing successful interiors. They should also come up with some interior design specific knowledge such as material selection, design for assembly, design for manufacturability, quality issues, etc.
INTD 499: PROJECT IN INTERIOR DESIGN (0-6-3)

This course explores the concept of a space. Students investigate site and client analysis, and then formulate design proposals from sketch scheme to final solution. The project is chosen by the student and subject to approval by a senior project advisor and coordinator. Advanced study, research, and data collection leading to the development of the graphic and three dimensional materials are required to illustrate the design process and the project solution. (Prerequisite: IDRM 498).

INTD 434: RESEARCH METHODOLOGY (3-0-3)

This course aims at developing an understanding of and an appreciation for using a structured design methodology. Students will have a better understanding of the wide range of aspects that must be effectively dealt with in designing successful interiors. They should also come up with some interior design specific knowledge such as material selection, design for assembly, design for manufacturability, quality issues, etc.

INTD 499: PROJECT IN INTERIOR DESIGN (0-6-3)

This course explores the concept of a space. Students investigate site and client analysis, and then formulate design proposals from sketch scheme to final solution. The project is chosen by the student and subject to approval by a senior project advisor and coordinator. Advanced study, research, and data collection leading to the development of the graphic and three dimensional materials are required to illustrate the design process and the project solution. (Prerequisite: IDRM 498).

INTR 411: INTERIOR DESIGN (BSID) INTERNSHIP (0, 12, 6):

This course provides practical training experience, off-campus on a job site, for BSID students to facilitate transition from the classroom to a professional work environment facilitating their seamless integration into the work force upon graduation as interior designers. This course aims to provide students with first-hand experience of the day-to-day functions and duties of and operations undertaken by interior designers and to integrate knowledge and skills learned in the classroom with competencies required by the workplace. (Prerequisite: completions of at least 90 credit hours).

INTR 412: MASS COMMUNICATION AND PUBLIC RELATIONS (BSMCPR) INTERNSHIP (0, 12, 6):

This course provides practical training experience, off-campus on a job site, for BSMCPR students to facilitate transition from the classroom to a professional work environment facilitating their seamless integration into the work force upon graduation as media and public relations professionals. This course aims to provide students with first-hand experience of the day-to-day functions and duties of and operations undertaken by media and public relations professionals and to integrate knowledge and skills learned in the classroom with competencies required by the workplace.

INTR 421: ACCOUNTING AND FINANCE INTERNSHIP (0-0-6)

This course is taken as a substitute to two courses (3 credits hours each) from the program core elective courses. Students follow a training program in an organization related to their specializations in accounting or finance. The program aims to provide students with first-hand experience of the day-to-day functions, duties, and operations and to integrate what
they have learnt in the classroom with the competencies required in the workplace. The BSAF internship is a form of experiential learning and the aims are: To provide the students with an opportunity to integrate knowledge, skills and competencies learned in the classroom with practical application and skills enhancement in a related work-based/professional in accounting and finance, to ultimately enhance student employability in an accounting or financial capacity and at the same time to build relationships between the university, businesses and the local community, and to give employers an opportunity to guide and also evaluate future talent in the field of accounting and finance. (Prerequisite: Completions of at least 90 credit hours)

**INTR 422: BANKING AND FINANCE INTERNSHIP (0-0-6)**

This course is taken as a substitute to two courses (3 credits hours each) from the program core elective courses. Students follow a training program in an organization related to their specializations. The program aims to provide students with first-hand experience of the day-to-day functions, duties, and operations and to integrate what they have learnt in the classroom with the competencies required in the workplace. The BS in Banking and Finance internship is a form of experiential learning and the aims are: To provide students with an opportunity to integrate knowledge, skills and competencies learned in the classroom with practical application and skills enhancement in a related work-based/professional environment, to give students an opportunity to gain experience of a relevant work environment and to develop links with financial professionals in the field they are considering for a future career, to ultimately enhance student employability and at the same time to build relationships between the university, businesses and the local community, and to give employers an opportunity to guide and evaluate future talent in the field of Finance (corporate finance, international finance, investment management, security analysis, real estate finance), Banking (Commercial and Islamic banks) and Insurance. (Prerequisite: completions of at least 90 credit hours)

**INTR 423: ECONOMIC AND FINANCE INTERNSHIP (0-0-6)**

In today's turbulent economic environment, a country workforce is increasingly pivotal to business success. Stemmed from the desire and sense of responsibility that Ahlia University has against the society and their own students, and as part of their vision, of being leaders in the market of higher education, they do understand the need to invest in their capital made of partially their students in order to equip the market with talented workforce. Based on this INTR 423 course was introduced representing a structured opportunity to incorporate academic, professional and personal skill development which enables the student to gain a planned and directed learning experience. It enables the student to integrate knowledge gained through their classroom learning with the competencies made available through actual experience in a professional setting. The internship programme requires a minimum of 240 hours of work at the internship worksite. Students will receive academic credit after a successful completion of the programme. The numbers of credits that are earned by the student as a result of successful completion of the internship programme are 6 credits. (Prerequisite: Completions of at least 90 credit hours)

**INTR 425: MANAGEMENT & MARKETING INTERNSHIP (0-0-6)**

In this course, students follow a training program in an organization related to their specialization. The program aims to provide students with first-hand experience of the day-to-day functions, duties, and operations and to integrate what they have learnt in the classroom with the competencies required in the workplace. In today's turbulent economic environment, a country workforce is increasingly pivotal to
business success. Stemmed from the desire and sense of responsibility that Ahlia University has against the society and their own students, and as part of their vision, of being leaders in the market of higher education, they do understand the need to invest in their capital made of partially their students in order to equip the market with talented workforce. Based on this INTR 425 course was introduced representing a structured opportunity to incorporate academic, professional and personal skill development which enables the student to gain a planned and directed learning experience. It enables the student to integrate knowledge gained through their classroom learning with the competencies made available through actual experience in a professional setting. The internship programme requires a minimum of 240 hours of work at the internship worksite. Students will receive academic credit after a successful completion of the programme. The numbers of credits that are earned by the student as a result of successful completion of the internship programme are 6 credits. (Prerequisite: Completions of at least 90 credit hours)

**INTR 424: MANAGEMENT INFORMATION SYSTEMS INTERNSHIP (0-0-6)**

In today's turbulent economic environment, a country workforce is increasingly pivotal to business success. Stemmed from the desire and sense of responsibility that Ahlia University has against the society and their own students, and as part of their vision, of being leaders in the market of higher education, they do understand the need to invest in their capital made of partially their students in order to equip the market with talented workforce. Based on this INTR 424 course was introduced representing a structured opportunity to incorporate academic, professional and personal skill development which enables the student to gain a planned and directed learning experience. It enables the student to integrate knowledge gained through their classroom learning with the competencies made available through actual experience in a professional setting. The internship programme requires a minimum of 240 hours of work at the internship worksite. Students will receive academic credit after a successful completion of the programme. The numbers of credits that are earned by the student as a result of successful completion of the internship programme are 6 credits. (Prerequisite: Completions of at least 90 credit hours)

**INTR 431: BSMNE INTERNSHIP (0-12-6)**

The main objective of the Internship is to integrate the concepts that students learn in the Mobile and Network Engineering programme with practical experience by providing a training program that supplements and complements classroom work. (Prerequisite: Completion of 90 Credits)

**INTR 432: BSCCE INTERNSHIP (0-12-6)**

The main objective of the Internship is to integrate the concepts that students learn in the Computer and Communication Engineering programme with practical experience by providing a training program that supplements and complements classroom work.

**ITCS 101: INTRODUCTION TO COMPUTERS AND IT: (2-2-3)**

This course is an overview of computers and information technology. The aim of the course is to introduce computers (their uses, development, components, hardware and software) to the students and to teach them how to use MS Office.
ITCS 121: COMPUTER PROGRAMMING: (2-2-3)

This is an introductory course in programming using Visual Basic. Topics include elementary data types and structures, arithmetic and logical operators, declarations and input/output, control structures, and functions. Emphasis is placed on the development of problem-solving skills. (Prerequisite: ITCS 101)

ITCS 122: INTRODUCTION TO PROGRAMMING TECHNIQUES: (2-2-3)

This course introduces the fundamental concepts of programming using Java. The covered topics are primitive data types and operators, input/output, control statements, methods and functions, arrays and strings, classes and objects, and an introduction to Java applications and object-oriented design techniques. Emphasis is placed on the development of problem-solving skills. (Prerequisite: ITCS 101)

ITCS 201: OBJECT-ORIENTED PROGRAMMING I: (2-2-3)

This course emphasizes object-oriented programming techniques using Java. Topics include information hiding, abstract classes and objects, standard class methods, operator overloading, inheritance and polymorphism, exception handling, and GUI components. (Prerequisite: ITCS 122)

ITCS 202: COMPUTER SYSTEMS: (3-0-3)

This course provides broad background knowledge of computer hardware and software structures encompassing modern computer systems (such as operating systems, computer networks and object-oriented and component-based software information systems). This course imparts an understanding of systems thinking and covers key systematic structures in computer hardware, software and information systems. (Prerequisite: ITCS 101)

ITCS 203: FOUNDATIONS OF COMPUTING: (3-0-3)

The course covers the fundamental concepts of discrete mathematics that are widely used in information technology and engineering. The covered topics are logic and mathematical proofs, sets, functions, algebraic structures, Boolean algebra, logical circuits and switches, and graph theory. (Prerequisite: MATH 102)

ITCS 221: OBJECT-ORIENTED PROGRAMMING II: (2-2-3)

This course builds on the information gained from the previous Java programming courses. It concentrates on modelling the GUI and advanced software programming issues such as: Java Applets, Multimedia (applets and applications) and Multithreading. (Prerequisite: ITCS 201)

ITCS 222: VISUAL PROGRAMMING: (2-2-3)

This course introduces Windows programming environment. Students learn how to write and develop programmes with a polished graphical user interface (GUI) using Visual Basic. Topics include data types and structures, arithmetic and logical operators, declarations and input/output, control structures, and functions. Emphasis is placed on the development of problem-solving skills. (Prerequisite: ITCS 122)
ITCS 223: MODELS OF COMPUTATIONS AND SYSTEMS: (3-0-3)

This course consists of three topical areas. The first part includes regular languages, deterministic and nondeterministic finite automata, and the pumping lemma for regular languages. The second part covers pushdown automata, context free languages and grammars, the pumping lemma for context free languages, and Turing machines. The last part covers decidability and an introduction to complexity theory. (Prerequisite: ITCS 203)

ITCS 303: DESIGN AND ANALYSIS OF ALGORITHMS: (3-0-3)

The course introduces classical techniques and paradigms used in the design and analysis of algorithms and data structures. Some of the covered techniques are induction and recursion, divide and conquer, dynamic programming, and greedy approach. Techniques like backtracking and randomization are also introduced to deal with NP-Complete problems. Students will be able to practice their skills on many well-known algorithms and data structures designed to solve practical problems. (Prerequisite: ITCS 223)

ITCS 305: INTERNET SERVICES & SECURITY: (3-0-3)

This course surveys modern Internet protocols and supporting algorithms for delivery of multimedia content and communications. Students learn to critically evaluate Internet technologies and design trade-offs and obtain hands-on experience with programming techniques for today’s Internet. In addition, guidance to help organizations improve the security of their networked computer systems is imparted addressing such issues as: identification, library search, planning, design and/or construction of equipment upon completion of the project, the student must submit a final written report outlining the various phases of the project and make an oral presentation. (Prerequisite: ITMS 205)

ITCS 311: SOFTWARE ENGINEERING METHODS: (3-0-3)

This course imparts knowledge and skills necessary for the design of object-oriented software systems in terms of design concepts and methods (specifically the notation, models, strategies and processes for design and design documents using a recognised object-oriented method). Emphasis is placed on use of a Use-Case-driven method that is built on the Unified Modelling Language (UML). Students can expect to learn how to both read and write well-formed designs that employ UML. (Prerequisite: ITCS 201)

ITCS 321: PROFESSIONAL SOFTWARE PRACTICE: (3-0-3)

This course provides skills and knowledge involving legal, social and ethical issues involved in professional software practice. It underscores rules of professional conduct to which professional software bodies subscribe to prepare students for a career in professional software practice. (Prerequisite: ITCS 311)

ITCS 323: DATABASE SYSTEMS: DESIGN & APPLICATION: (2-2-3)

This course provides a comprehensive introduction to the fundamentals of database modelling, design, implementation and management with emphasis placed on key aspects of the relational model and relational systems (data structure, data manipulation and data integrity). The student will learn how to design and implement a simple relational database which entails modelling data requirements using appropriate techniques (basic ER diagram,
logical model and normalised tables) and creating, maintaining and manipulating both a relational database (using SQL) and a relational database management system (MySQL). (Prerequisite: ITCS 222)

**ITCS 324: SOFTWARE ANALYSIS & VERIFICATION: (3-0-3)**

The principal aim of this course is to hone skills in the analysis, development and testing of code, executing a program, with a view to improving efficiency or locating certain types of faults. The two topics, of software analysis and software testing are linked through considering software analysis techniques that may be used to support testing. Students actively participate in the main software development activities that straddle the production of an initial implementation and the delivery of the complete system. (Prerequisite: ITCS 311)

**ITCS 328: MOBILE INFORMATION DEVICE PROGRAMMING: (2-2-3)**

This course introduces students to programming in the Java 2 Micro Edition, or J2ME, and develops skills in Java programming for wireless devices via the Mobile Information Device Profile, or MIDP (the profile defined within the J2ME for small mobile devices such as cell phones and PDAs.) The course begins with a top-down tour of the J2ME architecture, focusing on wireless programming via the Connected, Limited Device Configuration, or CLDC, and the MIDP. MIDP study begins with three chapters on user-interface design, which in MIDP is dramatically different from standard Java. Students learn the high- and low-level UI frameworks, and how to use commands and events. The final module of the course moves beyond basic knowledge of the API to develop effective coding techniques. (Prerequisite: ITCS 221)

**ITCS 333: INTRODUCTION TO SQL (ODBA – 1): (2-2-3)**

This course introduces students to SQL giving them an in-depth knowledge into all the various commands including the SQL SELECT statement, sorting of data, customizing Reports, using of the SET Operators, Manipulating of Data Controlling of User Access, Hierarchical Data Retrieval and Manipulation of Large Data Sets. (Prerequisite: ITCS 323)

**ITCS 334: INTRODUCTION TO PL/SQL (ODBA – 2): (2-2-3)**

This course trains students to program with PL/SQL, declare PL/SQL identifiers, and write executable statements. It helps them to work with composite data types, explicit cursors, creating of stored procedures and functions, creating of dynamic SQL and metadata and provides knowledge into design consideration for PL/SQL Code. (Prerequisite: ITCS 333)

**ITCS 401: SOFTWARE PROJECT MANAGEMENT (3-0-3)**

This course introduces and develops concepts central to the management of software projects (decomposing projects into stages) that entail appreciation of both key, generic project management concepts and techniques, and techniques and approaches specific to software projects. (Prerequisite: ITCS 311)
**ITCS 409: OPERATING SYSTEMS: (3-0-3)**

This course is a brief introduction to what an operating system is and how an operating system works. Students learn how an operating system provides an environment in which users can execute programs in a convenient and efficient manner. Topics covered include computer system structures, operating system structures, and process management: (threads, CPU scheduling, process synchronization, Deadlocks, Storage Management). (Prerequisite: ITCS 303)

**ITCS 418: MOBILE ENTERPRISE SYSTEMS: (3-0-3)**

This course illustrates the mobility demand within the enterprise systems. It covers such systems behaviours, users, services and security. (Prerequisite: ITCS 202)

**ITCS 422: DISTRIBUTED SYSTEMS: (3-0-3)**

This course introduces the basic principles of distributed systems. It covers basic definitions, architectures, processes, communications, naming, and security of a distributed system. (Prerequisite: ITCS 409)

**ITCS 424: INFORMATION SYSTEMS: (3-0-3)**

This course provides an overview of information systems from an organizational, managerial, and technical perspective. The topics covered will focus on the strategic role of information systems and information technology in business processes, change and knowledge management, group and individual decision-making, and electronic commerce. (Prerequisite: ITCS 202)

**ITCS 433: DATABASE ADMINISTRATION I (ODBA – 3): (2-2-3)**

This course gives students knowledge on Installing Oracle Database 10g Software, Controlling of the Databases, Database Backups & Recovery and Administering Users. (Prerequisite: ITCS 334)

**ITCS 434: DATABASE ADMINISTRATION II (ODBA – 4): (2-2-3)**

The ODBA-4 course provides information on Diagnostic Resources, Globalization Support, Managing Resources, Flashback Databases, and Recovering from user Errors. It also provides details on monitoring and Management of Memory and Automating Tasks with the Scheduler. (Prerequisite: ITCS 433)

**ITCS 499: PROJECT IN INFORMATION TECHNOLOGY: (0-6-3)**

Each student is required to select a theoretical and/or a practical problem related to his major area, and works under the supervision of a faculty member. All stages of project development should be emphasized including problem identification, library search, planning, design and/or construction of equipment upon completion of the project, the student must submit a final written report outlining the various phases of the project and make an oral presentation. (Prerequisite: IERM 498)
**ITCS 500: OBJECT-ORIENTED PROGRAMMING: (3-0-0)**

An intensive course on object-oriented programming (OOP) paradigm and advanced techniques of the Java language. Topics include: Java, Object Model, Classes and Objects, Constructors and Destructors, Inheritance, Virtual Functions and Polymorphism, Operator Overloading, Exceptions, Generic Programming and Standard Template Library.

**ITCS 502: DATA STRUCTURES & ALGORITHMS: (3-0-0)**

This course emphasizes data structures and the development and analysis of their associated algorithms. Data structures and algorithms form a major component of any software system. Students learn to make intelligent decisions about alternative techniques, choosing from existing data structures and algorithms or designing his/her own when necessary. Topics span: asymptotic analysis of algorithms, methods for proving correctness, implementation of algorithms.

**ITCS 506: ADVANCED ALGORITHMS: (3-0-3)**

This course covers the design, proof of correctness and analysis of algorithms. Examples are drawn from algorithms for advanced data structures, set manipulation and searching, graphs and geometric problems. Analysis techniques include asymptotic worst case and average case, as well as amortized analysis. Average case analysis includes the development of a probability model. Techniques for proving lower bounds on complexity are discussed, along with NP-completeness. Students learn (1) a range of advanced algorithms in areas such as string searching and graph algorithms, (2) the notion of complexity classes for algorithmic tasks, completeness and hardness, and proofs by reduction, and (3) distributed and probabilistic algorithms.

**ITCS 508: SYSTEMS PROGRAMMING: (3-0-3)**

This course provides computer engineering students with system design software and hardware experience. Students are required to implement and test interface software, written in assembly language and C, that controls hardware devices on the personal computer such as the keyboard, the CRT, serial and parallel ports, and PCI-based controllers. Students also are required to build a basic computer system using off-the-shelf components. This course includes a laboratory. This is an introduction to computer architecture and systems programs, machine organization, instructions, data representation, and addressing. Topics covered include assemblers, linkers, loaders, operating systems, and elementary assembler language programming.

**ITCS 509: ARTIFICIAL INTELLIGENCE: (3-0-3)**

This course gives a broad survey of artificial intelligence and emerging areas of human-centered robotics and interactive robotic simulation of virtual environments. The artificial intelligence component of the course covers definition of heuristic versus algorithmic methods, rationale of the heuristic approach, description of cognitive processes, objectives of work in artificial intelligence, simulation of cognitive behaviour, and heuristic programming techniques while surveying examples from representative application areas including expert systems, the mind-brain problem, and the nature of intelligence. Several basic techniques such as search methods, formal proofs and knowledge representation are covered. The robotics component of the course covers: redundancy; task-oriented dynamics and control, whole-body control-task and posture decomposition, cooperative robots, robotics and simulation, hectically augmented teleoperation and human-friendly robot design.
**ITCS 510: DATA MINING (3-0-3)**

This course introduces the main processes and main techniques of data mining. It includes: association rule learning, classification approaches such as inductive inference of decision trees and neural network learning, clustering techniques, and research topics such as inductive logic programming, multi-relational data mining and time series mining.

**ITCS 511: ADVANCED DATABASE SYSTEMS: (3-0-3)**

This course explores data-bases as the underlying framework of information systems which store, manipulate and retrieve data with particular emphasis on the relational model and relational systems. Students are expected to design and implement a relational database within the concept of an information system using appropriate analysis and modelling techniques and a modern Database Management System as well as to understand RDBMS, advantages and disadvantages of different query languages and concurrency control and basic query processing.

**ITCS 514**

This course focuses on object-oriented approach necessary to solve advanced and complex real-world problems. It is to understand a range of specialized theories, principles and concepts of object-orientation; object oriented software development process; the use of object-oriented design tools such as UML for modeling problem solutions. Topics include: Problem analysis and specification of software requirements; object-oriented design; reusability and design patterns; unit testing; advanced software development methodology such as Adaptive Object-Oriented Software Development.

**ITCS 515**

Business intelligence (BI) refers to the science of using advanced analysis and reporting tools to discover the necessary information used by an organization to make sound decisions. In this course, students will learn how to maximize business advantage by locating, extracting and dispersing information. Moreover, students will be introduced to some BI software and tools such as Microsoft BI. The covered topics include business intelligence framework, infrastructure, and current techniques used to extract, transform, and analyze business data, and to discover knowledge to support business decision-making.

**ITCS 518**

The course discusses the principles of design and development for mobile device applications. Students will learn how to develop, simulate, and test Android applications. The topics covered include Android platform; mobile hardware; cell networks; mobile architectures, operating systems, languages, development environments and simulators, and user interfaces; location-based services; data storage and retrieval.

**ITCS 520**

This course covers foundational techniques and tools required for data science and big data analytics. The course focuses on concepts, principles, and techniques applicable to any
technology environment and industry with emphasis on systems and algorithms for large-scale advanced data analysis. Topics covered include concepts and algorithms for building big data systems, data analytics lifecycle, basic and advanced analytics methods, and emerging big data technology and tools.

**ITCS 526**

This course provides an overview of cloud computing that uses Internet as the platform. It discusses cloud concepts and capabilities across the various available service models including: Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS), and Software-as-a-Service (SaaS). In addition, it covers accessing cloud system, cloud computing security and performance.

**ITCS 530**

Bioinformatics is the study of the structure and function of genes and proteins through the use of computational analysis, statistics, and pattern recognition and the use of databases, search and web-based interfaces to store, annotate and retrieve gene, protein and other information. This course focuses on the computing aspects of Bioinformatics. It introduces the broad frontiers of bioinformatics topics from fundamental algorithms to practical tools. Course topics include an overview of some bioinformatics resources, pattern matching, sequence alignment, gene prediction, fragment assembly, multiple alignment, phylogeny, statistical and machine learning approaches.

**ITCS 534: ADVANCED DISTRIBUTED SYSTEMS: (3-0-3)**

The internet and recent advances in client-server and peer-to-peer open distributed computing such as Java and many types of middleware has presented the opportunity of combining these highly sophisticated distributed systems technologies with a range of information systems application domains. The distributed information systems will deliver faster, highly reliable applications that are accessible globally. This course affords students the opportunity to solve a distributed systems development problem by application.

**ITCS 550: RESEARCH METHODS AND MODELING: (3-0-3)**

A primer on designing and executing a research project using analytic techniques, this course presents both useful quantitative models, drawn particularly from management science, and qualitative methods relevant to research in both business and information technology. (Same as MAGT 550)

**ITCS 595: DISSERTATION TRACK 2 IN IT AND COMPUTER SCIENCE: (0-12-6)**

The student conducts a study on a topic in the field of computer science under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: ITCS 550 plus 21 Credits).

**ITCS 599: DISSERTATION TRACK 1 IN IT AND COMPUTER SCIENCE: (0-24-12)**

A structured supervised in-depth study on a pre-approved topic in the field of information technology can entail one of three methodologies: (1) a literature-focused study which aims
to critically discuss the literature within a specified topic area; (2) a research focused study which aims to draw on practical data to assess critically a specified area or topic; or (3) a practical software development study which aims to explore an area or ideas, or demonstrate a concept through appropriate software development testing and critical analysis. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defence. (Prerequisite: ITCS 550 plus 21 Credits)

**ITCS 599: DISSERTATION IN INFORMATION SYSTEMS: (0-24-12)**

A structured supervised in-depth study on a pre-approved topic in the field of information technology can entail one of three methodologies: (1) a literature-focused study which aims to critically discuss the literature within a specified topic area; (2) a research focused study which aims to draw on practical data to assess critically a specified area or topic; or (3) a practical software development study which aims to explore an area or ideas, or demonstrate a concept through appropriate software development testing and critical analysis. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defence.

**ITMA 201: MANAGEMENT INFORMATION SYSTEMS: (3-0-3)**

Understanding the decision-making process and how information is used for decision support in organizations. Elements of decision theory and information theory. Essential practices for providing viable information to the organization. Information system planning and strategies. Human-computer interaction. Societal and ethical issues related to information systems use. (Prerequisite: MAGT 121)

**ITMA 321: E-SYSTEMS TECHNOLOGIES (3-0-3)**

This course explores some of the technologies and infrastructures required to support E-Systems. A secondary thrust of the course explores how these technologies impact consumer-business, business-business and intra-organizational e-business. (Prerequisite: ITCS 202)

**ITMA 322: DATA BASE MANAGEMENT SYSTEMS I (3-0-3)**

This course spans the entire scope of database management systems, especially relational DBMS (query processing and optimization, transaction processing, concurrency control, recovery, distributed transactions, database security, client-server, multi-tier architectures and web-deployed database systems). (Prerequisite ITMA 201)

**ITMA 323 MANAGEMENT INFORMATION SYSTEMS II: (3-0-3)**

This course develops a technology management perspective about information technology, asking and answering the question: how do we make the best technology decisions in the context of a dynamic business environment? The course is about technology values and risks, and the strategic importance of effective enterprise decision making about information and information technology infrastructure. Of particular focus is the business aspect of technology decision-making, using case studies and in-class presentations from industry executives and entrepreneurs. Included is technology project analysis, technology
leadership considerations, infrastructure management and architectures, electronic commerce issues, the design and implementation of computer-based information systems with emphasis on database and transaction aspects, the basics of database management, architecture of relevant database management systems, design and implementation strategies. (Prerequisite: ITMA201)

**ITMA 330: KNOWLEDGE MANAGEMENT: (3-0-3)**

Knowledge management spans the gamut of knowledge sharing, codification, transfer and generation. Using a socio-technical approach, this course covers the principal processes in knowledge management and underscores the role of IT systems that support the creation, capture, storage and dissemination of expertise and knowledge. Additionally, students explore the nature of technological change, innovation and intellectual capital. (Prerequisite ITMA 201)

**ITMA 401: E-COMMERCE: (3-0-3)**

The course presents a survey of consumer and business-to-business electronic commerce models, systems, and technical solutions in the national and global contexts connecting individuals, businesses, governments, and other organizations to each other. It provides an introduction to e-business strategy and the development and architecture of e-business solutions and their technical components that focuses on the linkage between organizational strategy and networked information techniques. The course will cover how businesses and consumers use the Internet to exchange information and initiate transactions. Students gain extensive hands-on experience tackling e-commerce problem-sets in a series of labs in which in-depth exploration of the seven design elements of the customer interface feature prominently. (Prerequisite: ITCS 101)

**ITMA 411: SYSTEM ANALYSIS AND DESIGN: (3-0-3)**

This course introduces students to the concepts and principles of systems analysis and design. It covers all aspects of the systems development life cycle from project identification through project planning and management, requirements identification and specification, process and data modelling, system architecture and security, interface design, and implementation and change management. Object-oriented analysis techniques are introduced. Students will learn to use an upper level CASE (computer-aided software engineering) tool, which will be employed in completing a real-world systems analysis and design project. (Prerequisite: ITMA 322)

**ITMA 412: MANAGING ENTERPRISE SYSTEMS: (3-0-3)**

Companies have been replacing their legacy systems with enterprise systems designed to connect the entire organization, including suppliers and customers, in a web-enabled computing environment that provides information to all participants as needed. This course explores the managerial and technical challenges in implementing enterprise systems and managing an organization with such an interdependent, connected system. From a technological view, students evaluate enterprise system to assess their functional capabilities and limitations. From a managerial view, students employ business cases to develop an understanding of the process of implementing and using enterprise systems effectively in organizations. (Prerequisite: ITMA 322)
ITMA 499: PROJECT IN INFORMATION TECHNOLOGIES MANAGEMENT & ADMIN: (0-6-3)

A structured, pre-approved project in ITMA ordinarily involving (1) research on a particular topic in ITMA or (2) reporting on field-work in an IT organization. Projects in ITMA ordinarily encompass MIS, data-base management and e-technologies/e-commerce. (Prerequisite: BFRM 498)

ITMA 570: MANAGEMENT INFORMATION SYSTEMS: (3-0-3)

This course promotes an integrated approach to identifying, capturing, retrieving, sharing and evaluating an enterprise’s information and knowledge assets. These information and knowledge assets encompass databases, documents, policies, and procedures as well as the un-captured, tacit expertise and experience resident in individual workers. Topics include artificial intelligence, information retrieval, groupware, data warehousing, human-computer interactions and multimedia/multilingual systems. This course endows students with real-world principles, tactics, and strategies for managing information technology in organizational settings.

ITMA 571: ADVANCED E-COMMERCE: (3-0-3)

Key concepts and debates concerning electronic commerce on the World Wide Web are explored in this course through an exploration of how technology has developed to support such commerce and how new forms of commercial activity and management of knowledge derived from that activity are emerging. Particular emphasis is placed on: the underlying technological infrastructure for e-commerce; the business and organizational possibilities inherent in the Web; the principles of developing and managing e-commerce systems; the rapidity of changes in business models in e-commerce; and the emergent social and technical trends of e-commerce. (Prerequisite: ITMA 570).

ITMA 574: SYSTEM PROJECT MANAGEMENT: (3-0-3)

Systems project management, broadly defined as the disciplined management of a process of change, Σ aims to provide a managerial environment for the integration of people, process and technology. This course explores such a managerial environment along different axes of approach: (1) traditional approaches to systems project management and (2) the role of project management in system development. (Prerequisite: ITMA 570).

ITMA 595: PROJECT DISSERTATION IN MANAGEMENT INFORMATION SYSTEMS: (0-12-6)

The student conducts a study on a topic in the field of management information systems under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: 21 core credits including MAGT 550).

ITMA 599: DISSERTATION IN MANAGEMENT INFORMATION SYSTEMS: (0-24-12)

A structured supervised in-depth study on a pre-approved topic in the field of management information systems and information technology can entail one of three methodologies: (1)
a literature-focused study which aims to critically discuss the literature within a specified topic area; (2) a research focused study which aims to draw on practical data to assess critically a specified area or topic; or (3) a practical software development study which aims to explore an area or ideas, or demonstrate a concept through appropriate software development testing and critical analysis. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defence. (Prerequisite: 21 core credits including MAGT 550).

**ITMS 205: INTERNET APPLICATIONS AND SERVICES: (3-0-3)**

This course examines the TCP/IP protocol suite and defines its origins and history, explains how it operates (for example transfer speeds for connection types LANs and WANs) and discusses important application tools and utilities (including the World Wide Web and electronic mail). It then looks at the role of TCP/IP in the network software marketplace and presents a guide for evaluating Internet connection strategies, focusing on balancing security, cost, and administrative elements towards an effective solution. Students also evaluate the strengths and weaknesses of mark-up languages (SGML, SGML DTDs, HTML and XML) and get a comprehensive introduction to JavaScript and JAVA language. (Prerequisite: ITCS 101)

**ITMS 301: INTRODUCTION TO INTERACTIVE SYSTEMS: (3-0-3)**

This course introduces and develops concepts that are central to the design of effective interactive systems: human aspects of interactive system design, basic technologies that are commonly employed, issues of design and design support, and evaluation approaches. A broad range of interactive systems that dominate Information Technology are considered from word processors. (Prerequisite: ITCS 222)

**ITMS 307: MULTIMEDIA SOFTWARES I: (2-2-3)**

This course can be described as two dimensional: one dimension introduces the students to the essential practical packages and another illustrates the multimedia project management process theoretically. (Prerequisite: ITCS 205)

**ITMS 325: WEB APPLICATIONS DESIGN: (2-2-3)**

This course provides a comprehensive introduction that demonstrates how to plan, organize, and create a website from start to finish. Students will learn how to use a variety of graphic design and web page authoring tools in designing a web site. (Prerequisite: ITCS 205)

**ITMS 327: MULTIMEDIA SOFTWARES II: (2-2-3)**

This course builds on the knowledge gained from a previous course (ITMS 307). The students will practice mainly two dimension graphs and animation professional software’s (Prerequisite: ITMS 307)

**ITMS 333: DOT NET 2.0 DEVELOPMENTS (MCTS – 1): (2-2-3)**

This course enables students to gain the skills on developing applications that use system types and collections to implement service processes, threading, and application domains in
a .NET Framework application. To provide skills on embedding configuration, diagnostic, management and installation features into a .NET Framework application and to implement serialization and input/output functionality in a .NET Framework application. (Prerequisite: ITCS 222)


The course provides students with the knowledge and skills to develop data-access applications by using the Microsoft .NET Framework and Microsoft Visual Studio 2005. This course also describes how to access data and how to implement database functionality by using Microsoft ADO.NET 2.0 and Microsoft SQL Server 2005. It describes how to locate, edit, and transform XML by using XPath and Extensible Style sheet Language for Transformations (XSLT). (Prerequisite: ITCS 333)

**ITMS 405: ADVANCED WEB APPLICATIONS DESIGN: (2-2-3)**

This course builds on the knowledge gained from a previous course (ITCS 325). Students begin by looking at interactions with databases, learning about querying both on paper and via SQL, and then, through a succession of projects, learn how to apply this understanding to the creation of an interactive data-driven site via the use of an integrated website development tool such as cold-fusion. (Prerequisite: ITMS 325)

**ITMS 426: 3D GRAPHICS SOFTWARES: (3-0-3)**

This course aims to improve students’ skills in generating concepts and mastering the techniques in 3D computer animation. Students create 3D modelling and incorporate original 3D video animations into multimedia projects. (Prerequisite: ITMS 327)


This course provides students with the knowledge and skills to develop Microsoft ASP.NET 2.0 Web applications using Microsoft Visual Studio 2005. It focuses on advanced user interfaces, Web site functionality, and implementation details using the advanced features of ASP.NET 2.0 and Visual Studio 2005. (Prerequisite: ITMS 334)


The course provides students with the knowledge and skills to develop Microsoft Windows Forms applications using Microsoft Visual Studio 2005. The course focuses on building menus, providing user assistance and enhancing usability, creating of consistent applications using dialogs and forms inheritance and performing of asynchronous tasks using Background Worker component. (Prerequisite: ITCS 433)

**ITMS 436: MULTIMEDIA APPLICATIONS: (2-2-3)**

Through this course the student gains experience implementing (theoretically and practically) tools and techniques imparted from previous courses in designing and producing a multimedia application. (Prerequisite: ITMS 426)
ITMS 499: PROJECT IN DISTRIBUTED SYSTEMS AND MULTIMEDIA: (0-6-3)

Each associate diploma student is required to select a theoretical and/or a practical problem related to his major area, and works under the supervision of a faculty member. All stages of project development should be emphasized including problem identification, library search, planning, design and/or construction of equipment upon completion of the project, the student must submit a final written report outlining the various phases of the project and make an oral presentation. (Prerequisite: BFRM 498)

ITMS 522: MULTIMEDIA INFORMATION SYSTEMS OVERVIEW: (3-0-3)

Multimedia Information Systems are concerned with the capture, storage and presentation of information in a variety of forms, including text, image, video and sounds. This course provides an introduction to the principles and practices of multimedia information systems, their authoring and their application to management in organizations with particular focus on: (1) developing skill in the design and management of information systems projects; (2) employing evaluation techniques for multimedia authoring systems and multimedia user interfaces; and (3) developing an understanding of the current state of multimedia applications and their impact on organizations. Students learn how to plan, organize and evaluate multimedia information technologies as well as to implement multimedia information systems using multimedia authoring tools.

ITMS 524: MULTIMEDIA ENGINEERING: (3-0-3)

This course introduces multimedia systems, architectures and data formats. The course emphasizes XML (extensible Mark-up Language), different X languages (XSLT, XML-SCHEMA, XHTML, XLINK, XPATH...) and multimedia applications (SVG, SMIL, and WEB SERVICES). CSS style sheets are also covered within this course. (Prerequisite: ITMS 522)

IREL 101: INTERNATIONAL RELATIONS: (3-0-3)

This course examines the theory of the nature and uses of power through coverage of the development of the nation-state system focusing on specific problems in international relations in the world today. The course covers a wide variety of topics. Basically it tackles elements of national power, sources of international conflict, the nature of war and strategy in the twentieth century, measures to resolve conflicts, and prospects for the future. The course concludes with an analysis of foreign policies and the role of Middle Eastern states in world politics and problems of, and prospects for, the Middle East in the light of international political developments.

LAW 101: INTRODUCTION TO LEGAL SYSTEMS & LEGAL REASONING: (3-0-3)

The first half of this course consists of an introduction to theories of the nature, functions and origins of law and legal systems including: sources of law, the nature of courts and selected other legal institutions, a comparison of legal systems, and the special nature and sources of international law. Students gain exposure to legal reasoning including both statutory interpretation and case-law reasoning in the second half of the course.
MAGT 121: FUNDAMENTALS OF MANAGEMENT: (3-0-3)

Overview of management theory and practice. Introduction to the study of managerial skills, organization structure, management functions, process, and system within an action frame of reference. Managerial concepts and terms related to leadership, employees’ motivation, decision making models and management of change are also covered.

MAGT 310: QUANTITATIVE ANALYSIS FOR BUSINESS: (3-0-3)

Introduction to managerial decision analysis using quantitative tools and spreadsheet modeling. Topics include a general framework for decision analysis, decision tables and trees, linear and integer programming, sensitivity analysis, classical optimization and statistical techniques. Extensive use of applicable decision support software and EXCEL Solver to solve mathematical and business decision models. Emphasis is on applications of quantitative analysis and tools rather than on mathematical theory. Applications are taken from finance, marketing, economics, logistics, and operations management. (Prerequisite: STAT 202)

MAGT 322: PRODUCTION AND OPERATIONS MANAGEMENT: (3-0-3)

The course includes the strategic, tactical, and operational issues that arise in the management of production and service operations; product and process design, facilities planning, quality management, materials management, operations planning and scheduling, and emerging technologies in production and service management. (Prerequisite: ITCS 101 & STAT 101)

MAGT 323: HUMAN RESOURCE MANAGEMENT: (3-0-3)

Overview of human resource management theory. The course focuses on the HRM practices and their importance to business organizations. In specific, it discusses the conceptual definitions and their application to business settings. Issues of recruitment and selection, training and development, performance management and appraisal, compensations, ethics and labor relations management are key topics for HRM learners to understand. (Prerequisite: MAGT 121)

MAGT 324: ORGANIZATIONAL BEHAVIOR AND LEADERSHIP DEVELOPMENT: (3-0-3)

This course is an introduction to the principles of Organization Behavior (OB) and Leadership. Key concepts in OB are covered such as personality dynamics, attitudes and emotions, motivation, perception, communication, leadership, teamwork and interpersonal skills. (Prerequisite: MAGT 323).

MAGT 331: BUSINESS SIMULATION: (3-0-3)

This course develops business simulation models using the EXCEL environment and a business simulation program as aids to corporate decision-making. Decisions span marketing, finance, operations and management. Students participate in a computerized business simulation program. (Prerequisite: STAT 202)
MAGT 412: INTERNATIONAL BUSINESS: (3-0-3)

This course provides a comprehensive overview of the environment of international business and to the operation of international firms especially in the context of emerging markets. Major topics include basic concepts of world trade and investment problems, the nature of international business, economic theory and international business operations as well as strategies and tactics for dealing with special problems and challenges arising in the global market. (Prerequisite: ECON 102 & completion of at least 90 credits).

MAGT 414: QUALITY MANAGEMENT: (3-0-3)

This course provides an understanding of the multifaceted nature of quality management by emphasizing on quality philosophies, and total quality management. It offers a Fundamental understanding of the Quality management process within firms, issues of quality planning and control. It provides hand-on experience of the tools and techniques of quality management. It includes Global aspects of quality, Quality Culture and Responsibility, Quality Standards and Total Quality, Quality Tools, Quality Function Deployment, Statistical Quality control, Continuous Improvement, six Sigma, and Total Quality Management. It discusses briefly managing quality in information systems management; ISO9000 and Capability maturity model. (Prerequisite: STAT 202)

MAGT 416: PROJECT MANAGEMENT: (3-0-3)

The organization, planning and controlling of projects and provides practical knowledge on managing project scope, schedule and resources. Topics include: project life cycle, work breakdown structure and Gantt charts, network diagrams, scheduling techniques and resource allocation decisions. Concepts are applied through projects and tutorials using project management software. (Prerequisite: MAGT 322)

MAGT 423: STRATEGIC MANAGEMENT: (3-0-3)

Introduction to strategic planning covering key concepts and techniques, organizational mission, goals, objectives and scope of operations. Environmental scanning, strategy formulation and implementation with special reference to functional application on marketing, personnel, finance, and other areas. (Prerequisite: MAGT 121& completion of at least 90 credits)

MAGT 424: ENTREPRENEURSHIP AND INNOVATION: (3-0-3)

The course provides an overall view about major schools of entrepreneurship thought and the process approaches to the study of entrepreneurship. It also covers issues related to individuals and corporate entrepreneurial mint-set beside the concept of ethics and social responsibility. Further to that, the course will expose the students to the processes of creativity and innovation, major types of innovation, method to initiate new ventures, development of new ventures business plan and strategic planning for entrepreneurial initiatives. (Prerequisite: MAGT 324 & completion of at least 90 credits)

MAGT 430: SUPPLY CHAIN MANAGEMENT: (3-0-3)

Analysis of the entire flow of information, material, and services from suppliers through factories and warehouses to the end customer including logistics, supplier selection and inventory management by case studies, optimization and simulation. (Prerequisites: MAGT 322)
MAGT 431: ADVANCED SPREADSHEET MODELING FOR MANAGERS: (3-0-3)

Spreadsheets have become a popular model-building environment for managers. Add-ins and enhancements to EXCEL have made powerful decision-making tools available to the manager. This course covers how to use the spreadsheet to develop and utilize some of these decision-making aids. Visual Basic for EXCEL allows the nonprogrammer to create modules for functions, subroutines and procedures. Topics include: forecasting (both regression and time series), decision-making under uncertainty and decision trees, using SOLVER for optimization and probabilistic simulation using @RISK. (Prerequisites: MAGT 310 & MAGT 331)

MAGT 499: PROJECT IN MANAGEMENT: (0-6-3)

A structured, pre-approved project in management or marketing ordinarily involving (1) research on a particular topic in management or (2) reporting on field-work in a managerial organization. (Prerequisite: BFRM 498 & ETHC 391)

MAGT 500: Quantitative Methods: (2-0-2)

This course introduces applied statistics for business and management with topics in descriptive statistics, estimation, hypothesis testing, analysis of variance, simple regression and correlation, and time series forecasting. The various tools learned will be applied through the use of worksheet computer applications and realistic interpretation of their output. The course is designed to acquaint the student with issues in methods of data analysis in the real world. Examples arise from finance, marketing and other functional areas of business research.

MAGT 550: RESEARCH METHODS AND MODELING: (3-0-3)

A primer on designing and executing a research project using analytic techniques, this course presents both useful quantitative models, drawn particularly from management science, as well as qualitative methods relevant to research in both business and information technology. (Prerequisite: MAGT 500 or equivalent)

MAGT 551: OPERATIONS AND QUALITY MANAGEMENT: (3-0-3)

Quality in both operations and production are key to achieving competitiveness in the global marketplace. An examination of those issues forms the heart of this course, where you will learn the principles of Total Quality Management and how it is implemented at all levels of an organization. Other important topics addressed by this course include forecasting, technology management, capacity planning and materials management. (Prerequisite: MAGT 500 or equivalent)

MAGT 552: DECISION ANALYSIS AND BUSINESS FORECASTING: (3-0-3)

Topics may include: decision-making under uncertainty, decision trees, multi-criteria decision-making, data envelopment analysis (DEA), analytical hierarchy process (AHP), principles and methods of forecasting including an evaluation of: the reliability of existing forecasting techniques, national and international business trends and the role of business forecasting in managerial planning. The use of time series methods including exponential smoothing and Box-Jenkins (ARIMA) techniques for business and economics forecasting are introduced. (Prerequisite: MAGT 500 or equivalent).
MAGT 554: STATISTICAL INFERENCES IN MANAGERIAL DECISION MAKING: (3-0-3)

Presents advanced techniques and applications of multivariate statistical methods, such as multiple regression, analysis of covariance, discriminant analysis, multivariate analysis of variance, factor and cluster analysis. Application of research methods for enhancing managerial decision-making in business, marketing, economics, and finance are emphasized. (Prerequisite: MAGT 550)

MAGT 555: OPERATIONS MANAGEMENT STRATEGY: (3-0-3)

Operations managers must take strategic decisions to operate a production or service system to give the firm a sustainable competitive advantage in a global marketplace. The specific topics include operations strategy framework, process management, and management of technology, workforce management; total quality management, capacity, location planning, project management planning, and measure of performance. (Prerequisite: MAGT 500 or equivalent)

MAGT 560: HUMAN RESOURCE MANAGEMENT: (3-0-3)

The course emphasizes the role of human resources as the most important asset in an organization. Students gain insight into the importance of proactive human resources management for organizational performance vis-a-vis alternative views of human resources management. The concept of strategic human resources management is applied with a view to underscoring the importance of fitting human resources practices to business strategy. Topics draw from different disciplines to explain the principles of human resources planning, recruitment and selection, training and development, career development, job analysis and job design, performance management and performance appraisal. The course also covers employees' compensation, protection, incentive plans and reward system as well as the management of international human resources.

MAGT 561: STRATEGIC MANAGEMENT: (3-0-3)

The course covers the strategic management process and corporate strategy: the concept of strategy and its relationship to performance, competitive advantage, and profitability; and the main components of the strategic management process including analysis of both external and internal environments. Students gain an appreciation of how organizations can build competitive advantage using different levels of strategy in different contexts spanning the global environment. Concepts such as integration, diversification, acquisitions and business ethics are evaluated through the lens of corporate strategy.

MAGT 562: COMPETITION, INNOVATION AND STRATEGY: (3-0-3)

Drawing from different disciplines to examine what makes certain organizations outperform others, this course focuses on competitive market forces and various external and internal factors shaping organizational strategies to maintain competitive advantage. Students explore various models of innovation and meet the challenge of building and maintaining innovation as one of the core competencies of the organization necessary for sustaining superior performance. This course inculcates the principles of innovation management process and emphasizes the importance of internal processes and external linkages.
MAGT 563: ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT: (3-0-3)

In this course, students cultivate conceptual and applied skills requisite to developing and managing an economically successful small business. Entrepreneurial talents are focused and practical decision making skills are developed through experiential activities in small businesses. Students initially explore the concept of entrepreneurship and evaluate themselves in terms of their own personal entrepreneurial potential with a view to formulating and realizing opportunity nuclei for profitable small business. Subsequently, students conduct feasibility studies and formulate business plans for feasible projects.

MAGT 564: LEADERSHIP IN ORGANIZATIONS: (3-0-3)

An introduction to leadership, its practice, associated theory and current research. Presenting modern thought and practice related to leadership and the core competencies of successful leaders, this course introduces the leadership challenge in organizations and focuses on how to improve leadership effectiveness. Major theories and research on leadership and its relationship to management are inculcated and then students have the opportunity to address and to debate controversies and different views about leadership effectiveness and essential characters of effective leaders. Students examine effective and ineffective behaviour through the lens of various models of leadership including transformational leadership. Experiential exercises, case studies and role playing techniques are employed to demonstrate leadership skills in leading teams and leading change.

MAGT 565: ORGANIZATIONAL BEHAVIOR: (3-0-3)

Drawing from different disciplines including psychology and sociology, this course examines the nature of human behavior in various organizations as a function of the individual, the group within which the individual interacts, and the organizational setting. Topics include individual’s values, perception, and attitude. Students examine the influence of process within organizations -- such as motivation, leadership, communication, and group dynamics of teams, decision-making and conflict resolution -- on individual behaviour and performance. Special attention is paid to the role of job design, organizational structure, organizational culture and change.

MAGT 595: PROJECT DISSERTATION IN MANAGEMENT: (0-6-3)

The student conducts a study on a topic in the field of management under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: 21 core credits including MAGT 550)

MAGT 599: DISSERTATION IN MANAGEMENT: (0-24-12)

A structured supervised in-depth study on a pre-approved topic in the field of management can entail one of two methodologies: (1) a literature-focused study which aims to critically discuss the literature within a specified topic area or (2) a research focused study which aims to draw on practical data to assess critically a specified area or topic. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defence. (Prerequisite: 21 core credits including MAGT 550)
MAKT 201: PRINCIPLES OF MARKETING: (3-0-3)

This course serves as an introduction to marketing in general, and the marketing process in particular. Students will develop a thorough understanding of the marketing concept/process, the marketplace and the differences between consumer and business markets. They will also learn how to design a customer-driven marketing strategy which employs the marketing mix, whilst keeping pace with digital age developments linked to marketing activities. (Prerequisite: MAGT 121)

MAKT 310: CONSUMER BEHAVIOR: (3-0-3)

This course covers a comprehensive study of behavior models and concepts to help understand, evaluate, and predict consumer behavior in terms of marketing implications. Determinants of consumer behavior are explored to gain understanding of the complex forces as they affect the market place. The course’s emphasis is on the understanding of the processes that influence the acquisition, consumption, and disposition of consumer goods and services. (Prerequisite: MAKT 201)

MAKT 320: MARKETING OF FINANCIAL SERVICES: (3-0-3)

A comprehensive study of key issues that surround the marketing of financial services focusing on how banks and other financial institutions employ marketing practices to ensure sustained and profitable growth utilizing such techniques such as: product positioning, segmentation, and relationship management and retention. The course also provides insight into launch of innovative financial products and delves into legal and ethical framework in which financial service marketing is conducted. (Prerequisite: MAKT 201)

MAKT 321: MARKETING RESEARCH: (3-0-3)

Introductory analysis of the fundamental of the marketing research focusing on different types of marketing research (qualitative and quantitative) as well as on complex issues at each stage of the research process. This course covers research used in marketing decision making with primary emphasis on methods and techniques used in collecting, processing and utilization of information. Topics include research design, sources of information, questionnaire design, sampling, data collection and analysis. (Prerequisite: STAT 202)

MAKT 322: SALES MANAGEMENT: (3-0-3)

A comprehensive study of selling and the field of sales management that help to understand comprehensively the selling process, strategic field sales management, the sales organizations’ structure, profiling and recruiting, selecting and hiring sales people. The course is intended also to provide through understanding of the process of developing and reinforcing sales force training programs including motivation and compensation of sales force. In addition the course should provide the student with the capability to understand and implement the strategic positioning process, leadership styles, Forecasting and budgeting, and evaluation of sales force performance. (Prerequisite: MAKT 201)

MAKT 331: INDUSTRIAL MARKETING: (3-0-3)

Focusing on methods of marketing decision-making in industrial, government and high-tech markets, planning and implementing business-to-business marketing strategies with an
emphasis on segmenting markets, managing channel relationships, and creating customer value through continuous improvement and re-engineering receives center stage. This course emphasizes the unique nature of marketing high technology in its application of the basic elements of marketing strategy – market segmentation and targeting, marketing mix elements – to the context of high technology goods and services. Students develop effective strategic, marketing plans for high technology products. (Prerequisite: MAKT 201)

MAKT 332: ADVERTISING & PROMOTIONS MANAGEMENT: (3-0-3)

The course aims to develop the student’s planning skills in formulating communication mix strategies. The content directly addresses the principles and practices of marketing, solving promotion problems in practice, and design marketing strategies for the digital era. Also, the classroom activities and assessments develop students’ teamwork, and expertise in promotion and advertising. (Prerequisite: MAKT 201)

MAKT 412: INTERNATIONAL MARKETING: (3-0-3)

This course examines the impact of economic, cultural, political, legal and other environmental influences on international marketing. Within this context, how to identify and analyze worldwide marketing opportunities, and examine product, pricing, distribution and promotion strategies will be discussed. The course is structured to provide ample opportunity for interaction among students, and between students and the instructor. Students are expected to read current periodicals and journals to keep abreast of current international developments. The course will primarily consist of lectures, discussions, video presentations, cases, and group projects. Because of the emphasis on discussion and interaction, attendance on a regular basis will be expected. (Prerequisite: MAKT 201& completion of at least 90 credits)

MAKT 416: SERVICE MARKETING: (3-0-3)

Service organizations require a distinctive approach to marketing strategy – both in its development and execution. Focusing on non-financial service marketing of such commercially diverse enterprises as transportation companies, hospitals, consultancies and educational institutions, this course identifies best practices in the area of marketing management and service quality through a case-study approach. Focusing on the process of planning, organizing and implementing the marketing effort in service organizations, the course explores the distinctive aspects of service marketing. Special attention is paid to service positioning in the marketplace and determining the optimal marketing mix in a service organization. (Prerequisite: MAKT 310)

MAKT 421: STRATEGIC MARKETING: (3-0-3)

This course offers a fundamental understanding of the marketing strategy planning process within firms, marketing management problems encountered by senior marketing managers, marketing opportunity assessment, segmentation, competitive positioning and integration of product/service, price, promotion, and distribution. (Prerequisite: MAKT 201& completion of at least 90 credits)

MAKT 424: NEW PRODUCT DEVELOPMENT: (3-0-3)

The development of new products and services is arguably the most significant activity within a firm – as well as one of the most risky. This course examines the strategies,
processes and methods used by companies to introduce new products as well as the cutting edge tools and techniques used to develop new products. The first part of the course focuses on new product development strategies at different stages of product's cycle. The second part examines techniques for managing different stages of a product's development from generation to market launch. (Prerequisite: MAKT 201)

MAKT 431: CUSTOMER RELATIONSHIP MANAGEMENT: (3-0-3)

This course offers a thorough understanding of the concept of customer relationship management. It covers a number of areas including strategy and organization of CRM, the marketing aspects of CRM, the analytical aspects of CRM and the operational aspects of CRM. (Prerequisite: MAKT 310 & completion of at least 66 credits).

MAKT 499: PROJECT IN MARKETING: (0-6-3)

A structured, pre-approved project in marketing ordinarily involving (1) research on a particular topic in marketing or (2) reporting on field-work in a marketing organization. (Prerequisite: BFRM 498 & ETHC 391)

MAKT 511: MARKETING MANAGEMENT: (3-0-3)

This course explores a wide variety of topics in marketing and analysis of marketing opportunities through the case method: building customer satisfaction, value and retention; winning markets through market-oriented strategic planning, gathering information and measuring market demand, analysing consumer markets and buyer behaviour, competitor analysis, identifying market segments and selecting target markets, positioning and differentiating the market offering through the product life-cycle and developing new market offerings. Special emphasis is placed on analytical methods in solving marketing problems.

MAKT 515: NEW PRODUCT DEVELOPMENT: (3-0-3)

The course overviews the new product development process from the perspective of: opportunity identification/idea generation, product design, testing and launch and life-cycle management. This course introduces students to the process of designing and marketing new products and how powerful analytic methods – including, but not limited to, factor analysis, multidimensional scaling and discriminant analysis -- can reduce risk and improve innovation.

MAKT 595: PROJECT DISSERTATION IN MARKETING: (0-12-6)

The student conducts a study on a topic in the field of marketing under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: 21 core credits including MAGT 550)

MAKT 599: DISSERTATION IN MARKETING: (0-24-12)

A structured supervised in-depth study on a pre-approved topic in the field of marketing can entail one of two methodologies: (1) a literature-focused study which aims to critically discuss the literature within a specified topic area or (2) a research focused study which aims to draw on practical data to assess critically a specified area or topic. The dissertation
engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defence. (Prerequisite: 21 core credits including MAGT 550)

**MASC101: PRINCIPLES OF COMMUNICATION: (3-0-3)**

This course provides students with the basic knowledge needed to start their education in mass communication and public relations including: the components of the communication process, communication channels, and communication forms. Then a tour of what is communicated and communication effects are explored.

**MASC201: INTRODUCTION TO JOURNALISM AND PRINT MEDIA: (3-0-3)**

Students analyze the meaning, sources and the production of news, the structure and language of news writing, ethical considerations in news writing, media regulation, press institutions, advertising and other pressures on journalism, news gathering and the Internet. The course focuses on online publishing, research in journalism, representation and bias, objectivity and balance, and international news flow.

**MASC202: THEORIES OF MASS COMMUNICATION: (3-0-3)**

This course is designed to acquaint students with a number of different theoretical perspectives on mass communication. Theories of mass communication are subject to a systematic examination from various perspectives: communication effects, from both a psychological and sociological perspective; perspectives involving an active audience cognitively interacting with media; and an organizational/ institutional view of media. Students obtain an appreciation of the origins of mass communication theory and how to apply the leading current mass communication theories to the context of the use and presentation of images and information. (Prerequisite: MASC 101)

**MASC203: PUBLIC SPEAKING: (3-0-3)**

Application of basic principles of communication to the art of public speaking constitutes the centre-piece of this course. Students prepare and present speeches in both formal platform settings and informal group discussions. Without ignoring extemporaneous delivery, the emphasis of the course is on work behind-the-scenes: organizing ideas, structuring messages, and adapting messages for specific audiences. Attention is also given to methods for evaluating oral discourse. (Prerequisite: MASC 101)

**MASC204: INTRODUCTION TO RADIO AND TELEVISION: (3-0-3)**

A study of the history of radio and television and their relationship to other media. Students gain exposure to preparing news copies and documentary materials for radio and television, production formats, station operation and management, governmental regulations, and programming options and trends. They also gain insight into journalistic and performance skills necessary to achieve quality production.

**MASC310: DIGITAL JOURNALISM: (2-2-3)**

Introduces the student to the essentials of digital color prepress issues. An in-depth use of digital technology in the lithographic production and printing cycle will be explored. Students will experience both the theoretical and practical challenges of new prepress tools. Topics
will include color separations, digital trapping and digital halftones. (Prerequisite: MASC 101)

**MASC320: GRAPHIC AND MULTIMEDIA: (2-2-3)**

InDesign is a powerful design and production tool that perfectly embraces features of PageMaker, Photo Shop and Illustrator for professional desktop publishing. This course provides a hands-on introduction to InDesign, in which students become familiar with the InDesign interface and will be guided step-by-step, learning to set up a document, create master pages, and place text and graphics. In addition, students work with Photos Shop using the painting and editing tools and filters, and apply techniques for converting and resizing images and adding type to an image. (Prerequisite: ITCS 101)

**MASC330: POLITICAL COMMUNICATION: (3-0-3)**

Analysis of the role of media in political life and of the media government relationship in different political systems. Topics include political propaganda, political campaigns as well as media and foreign policy. (Prerequisite: PREL 220)

**MASC340: RADIO PRODUCTION: (2-2-3)**

Introduction to techniques and equipment used in radio production. Students will learn control board operation, recording, editing, and preparation of messages appropriate to the medium of radio. (Prerequisite: MASC 204)

**MASC350: DIGITAL PHOTOGRAPHY AND AUDIO-VIDEO: (2-2-3)**

An introduction to the historical, technical, operational and creative aspects of digital photography. The course focuses on the production of digital images and visual sequences that tell a story, communicate an idea, illustrate a theme, or convey a message. Techniques of planning, refining, capturing and manipulating images are explored in a workshop type atmosphere. Hands-on experience with digital cameras and image manipulation software is emphasized. Students will be expected to complete a series of tutorials and create several portfolio images demonstrating their understanding of the technical and aesthetic aspects of the digital photography. (Prerequisite: MASC 320)

**MASC351: NEWS WRITING & REPORTING: (3-0-3)**

Explores the techniques used to research and report complex political, social, and economic issues for all media. Students learn how to investigate the most common areas covered by reports, including education, legal affairs, and other governmental entities. Strategies are developed for individual reporting projects in print, broadcast, and digital media. Examples are critiqued to lead students toward an ethical and analytic approach to public affairs reporting. (Prerequisites: MASC 201 & MASC 204)

**MASC370: MEDIA & LAW: (3-0-3)**

Review of the development of the legal aspects of the press and other mass media through case studies. Topics include social responsibility and ethics of mass communication, free press versus press control, libel, contempt, obscenity, privacy and source protection, the people’s right to know, publication laws and regulations. (Prerequisite: MASC 101)
MASC380: PERSUASION: (3-0-3)

This course introduces students to persuasion theories and how to use them in information campaigns. Message, attitude and behavior relationships are discussed in relation to development of contemporary thought about communication and mass media effects. Factors related to source, message, medium and audience are investigated. (Prerequisite: MASC 202)

MASC390: DESIGN & LAY-OUT OF PRINT MEDIA: (2-2-3)

This course explores the various aspects of print media design and layout. Course materials are designed to advance an understanding of design tools, design principles, artisanship and conceptual skills through the exploration of visual elements, orders and concepts. The course covers typography, layout and general design and layout techniques. (Prerequisite: MASC 351)

MASC410: MEDIA TRANSLATION: (3-0-3)

This course is designed to provide students with the necessary skills to translate different media content from one language to another. Emphasis is placed on using translation techniques. Students are encouraged to translate news stories related to different aspects of life. (Prerequisite: ENGL 202)

MASC420: GRAPHICS & INTERNET - SITE DESIGN: (2-2-3)

This course explores the various aspects of graphic communication and provides students with necessary skills to use computers in graphic arts. The students will have hands-on experience using software in an electronic design studio environment to start their own internet sites. (Prerequisite: MASC 320)

MASC 430: TELEVISION PRODUCTION: (2-2-3)

Introduction to the basic aspects of technical and production techniques of television and related audio systems used in the medium. Emphasis is placed on theory and use of television equipment, direction, lighting, television graphics, scripting, basic engineering, distribution systems, and studio personnel. In addition to the student-produced and directed assignments, members of the class participate in production crews. (Prerequisite: MASC 204)

MASC 440: MASS MEDIA & SOCIETY: (3-0-3)

An examination and analysis of the mass media and the forces that influence them. Emphasis is placed on the media’s influence on our society. Issues and case studies vary with the instructor and the needs of society and students. (Prerequisite: MASC 202)

MASC 450: USING MULTIMEDIA & WEBCASTING: (2-2-3)

Introduces students to the basics of designing for interactive multimedia. User-interface design, transitions, interactive links between content areas and creating the overall look and feel of a project will be covered. Emphasis will be on the visual aspects of individual elements and how they work together as a means of creating an effective interactive
multimedia project. Students work on their own projects which will be completed in the Multimedia Production lab. (Prerequisite: MASC 420)

**MASC 460: SEMINAR ON COMMUNICATION RESEARCH: (3-0-3)**

Survey and discussion of literature in mass communication with emphasis on recent research findings. The questions asked, methods used, lessons learned and suggestions for future research are major topics. (Prerequisite: MASC360)

MASC 499: Project in Mass Communication: (0-6-3)

Topics vary in accordance with the instructor and the interests of the student. Approval of the department head is necessary. (Prerequisite: MPRM 498)

**MASC 500: COMMUNICATION THEORY: (3-0-0)**

Commencing with a survey of mass communication theory and the philosophical, sociological and political effects of mass media on audiences and societies, this course examines complex communication behaviors exhibited by stakeholders and publics in corporate and institutional settings and then proceeds by analyzing the news media in terms of its serving as conduits for global information. The course concludes with the role of mass communication in developing nations and its relationship to economic growth, education, socialization, persuasion and diffusion of innovation.

**MASC 501: BASIC CONCEPTS IN MASS COMMUNICATION: (3-0-3)**

The course deals with mass communication as a social and psychological phenomenon. It addresses topics such as the definition of the concept and the types and levels of communication and its effects, the development of communication through the successive periods of history, and characteristics of mass communication. It also introduces modern means and prototypes of communication.

**MASC 511: CONTEMPORARY TRENDS IN COMMUNICATION THEORIES: (3-0-3)**

This course aims to acquaint students with contemporary theories of communication. In particular, it deals with recent trends in mass communication and its role in modern societies, the functions of communication, theories of information dissemination, the effects of mass communication and the study of mass communication as social systems.

**MASC 512: NEWS WRITING IN ARABIC AND ENGLISH: (3-0-3)**

This course is designed to enhance students’ skills in writing news items both in Arabic and English. Students learn the differences between news writing and editing. The course also teaches students features, elements, concepts, types and sources of news items.

**MASC 513: NEWSPAPER EDITING AND LAYOUT: (2-2-3)**

The course explores the differences between writing news items and journalistic reports and introduces the students to the news writing styles (format, structure and techniques). It also deals with the concepts and principles of the artistic layout of newspapers and
magazines, traditional publishing methods and the use of electronic publishing software such as “Adobe Photoshop”, “Quark Express” and “Audi Streeter.”
(Prerequisite: MASC 512)

MASC 514: ARAB & INTERNATIONAL MEDIA: (3-0-3)

The course introduces the students to various issues in international media such as direct broadcasting, the cultural, legal and social problems of satellites and the problems of the new world order of media. It also deals with the theory of information flow between the developed and developing countries and the problems arising from the imbalance in the flow of information between them. It addresses the issue of unions and regional and international organizations and their impact on the international media as well as the image of Arabs in western media and how to improve it.

MASC 515: ELECTRONIC JOURNALISM: (3-0-3)

This course aims to introduce students to the types and advantages of electronic journalism. It highlights the use of computers and the internet in press production and editing and deals with the differences between news editing and writing in the printing press and electronic journalism.

MASC 521: BROADCASTING PRODUCTION WORKSHOP: (0-6-3)

Emphasis on individual production projects of the student's own conception and design utilizing studio, field and post-production techniques. This course covers broadcasting methods, studio production, and technical equipment video and audio production techniques. (Prerequisite: MASC 520)

MASC 525: SELECTED TOPICS IN COMMUNICATION RESEARCH: (3-0-3)

Surveying the field of communications research, various subfields are identified and explored and the future direction for communication research is discussed. Course content varies in accordance with student interests and the most recent developments in communications research.

MASC 535: MASS MEDIA & INFORMATION TECHNOLOGY: (3-0-3)

This course traces the development of information and communications technologies (ICTs) with a view to providing an overview of current and prospective developments in telecommunications as a theoretical basis for assessing the potential of these technologies in media-related institutions. Legal, regulatory, economic and social issues that the employment of these technologies poses for telecommunications and media industries also receive attention.

MASC 545: POLITICAL COMMUNICATION: (3-0-3)

Concept, history and theories of political communication are presented and discussed. Political language, advertising and campaigns are analysed. The relationship between media and governments in different political systems and its relationship with public opinion and democracy are explored in depth.
MASC 550: ADVANCED WRITING AND REPORTING FOR NEWS MEDIA: (3-0-3)

In this course, students conduct intensive reporting, researching and write in-depth articles for magazines, newspapers and electronic media. Students develop a journalistic style and explore problems associated with handling of news features and are encouraged to publish their own articles.

MASC 560: TELEVISION AND RADIO PRODUCTION: (2-2-3)

In this course, students obtain intensive exposure to television and radio production methods, studio production techniques, and technical equipment. Students conceive and design individual production projects that utilize studio, file and post techniques. This course covers the audio-visual production process from pre-recording or shooting conception to post-production.

MASC 575: GRAPHICS AND MULTIMEDIA: (3-0-3)

This course introduces students to the application of graphic arts to mass communications. The relationship among text, type and image in communicating information in basic layout on the one hand and news media image and story-telling is explored in depth. Students develop their own projects using graphics and multimedia.

MASC 580: MEDIA ETHICS AND LAW: (3-0-3)

This course provides an overview of the history of media freedom and control with respect to the ethics and laws relevant to the issue. Conflicts between media practices on the one hand and the rights of individuals and institutions on the other are explored in depth involving freedom to disseminate information versus the right to privacy. Media practices in different political systems are highlighted and the proper balance between controlled and free media is debated.

MASC 581: INFORMATION FOR MASS COMMUNICATIONS: (3-0-3)

This course surveys information resources for professional work in mass communication. Students learn and apply techniques for locating, retrieving, appraising and verifying information acquired from public records, libraries, research institutions, databases, the internet, observation and interviews. Construction and evaluation of polls and surveys.

MASC 585: SPECIAL TOPICS IN PRINT JOURNALISM: (3-0-3)

Topics span recent developments in print journalism and socio-economic, political and cultural aspects of society. Course content varies with the background of the instructor and the interests of the students.

MASC 590: SPECIAL TOPICS IN ELECTRONIC JOURNALISM: (3-0-3)

Topics span recent developments in electronic media and socio-economic, political and cultural aspects of society. Course content varies with the background of the instructor and the interests of the students.
MASC 598: PROJECT DISSERTATION IN MASS COMMUNICATION: (3-0-3)

The student conducts a study on a topic in the field of mass communication under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: MCPR 520)

MASC 599: DISSERTATION IN MASS COMMUNICATION: (0/24/12)

A research focused study in the field of mass communication which aims to draw on practical data to assess critically a specified area or topic.. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscripts subject to public defense. (Prerequisite: MCPR 520).

MATH 050: PREPARATOR MATHEMATICS FOR BUSINESS, ARTS & SOCIAL SCIENCE STUDENTS: (0-0-6)

A comprehensive programme that builds on and strengthens basic mathematics. It provides the necessary tools for understanding and handling relevant mathematics for business, arts and social science students. The course covers basic topics in algebra equations, inequalities, coordinate geometry, trigonometry, polynomials, indices, logarithms, functions and matrices.

MATH 052: PREPARATOR MATHEMATICS: (0-0-6)

This course is designed as comprehensive program that builds on and strengthens basic mathematics. It provides the necessary tools for understanding and handling relevant mathematics for science, business, arts, social sciences, IT and physiotherapy students. The course covers basic topics in algebra equations, inequalities, functions and graphs, polynomials, Logarithms, and matrices.

MATH 055: PREPARATOR MATHEMATICS FOR SCIENCE, IT & PRE-MEDICAL STUDENTS (0-0-6)

A comprehensive programme that builds on and strengthens basic mathematics. It provides the necessary tools for understanding and handling relevant mathematics for science, IT and pre-medical students. The course covers basic topics in algebra, trigonometry, complex numbers, functions and graphs and an introduction to sequences and series.

MATH 101: CALCULUS I: (3-0-3)

A powerful programme that introduces the student to several new ideas and concepts in mathematics, all of which are interesting and very useful to numerous other disciplines. The course covers limits and continuity; differentiation with rules and applications which include optimization and the mean value theorem; basic integration with simple applications; transcendental functions. (Prerequisite MATH 052 or 055 or placement test)

MATH 102: CALCULUS II: (3-0-3)

This is a continuation of Calculus I programme with emphasis on integration methods and
techniques followed by further integration and applications, Taylor and Maclaurin theorems, power series, infinite series and polar coordinates. (Prerequisite MATH 101)

MATH 103: MATHEMATICS I: (3-0-3)

The course builds upon basic mathematics or the preparatory course offered by the University. It introduces the student to new concepts useful to both business and technology students. Topics covered include matrices and systems of linear equations, linear programming, set theory and counting, logic, mathematics of finance. (Prerequisite MATH 050 or 052 or placement test)

MATH 104: MATHEMATICS II: (3-0-3)

This course introduces further topics and techniques, essential for handling and solving business and technology math problems. It covers basic concepts of differentiation, integration and their applications to problems in business; approximate integration, functions of more than one variable and their derivatives. (Prerequisite MATH 103)

MATH 201: Discrete Mathematics: (3-0-3)

An introduction to mathematical ideas and concepts which are more useful and relevant to the study of all aspects of computer science and engineering than traditional continuous mathematics. The course deals with such topics as logic, sets, mathematical proof, functions, algebraic structures and Boolean algebra. (Prerequisite MATH 101)

MATH 202: CALCULUS III (3-0-3)

This course builds on the previous two calculus courses, MATH 101 and MATH 102. The course covers topics spanning vectors, partial derivatives and multiple integrals, ordinary differential equations and Laplace transforms. (Prerequisite: MATH 102)

MATH 205: DIFFERENTIAL EQUATIONS: (3-0-3)

An integrated course that permits the student to learn how to formulate and express engineering and technology problems in terms of differential equations. It covers classification, methods and techniques of solutions. Included are: exact and separable types, linear second- and higher-order equations with constant coefficients: non-homogeneous and homogeneous ones; use of power series and Laplace transform methods. Some applications of differential equations are also considered. (Prerequisite MATH 102)

MCPR 360: COMMUNICATION RESEARCH METHODS: (3-0-3)

Introduction to scientific and research methods for mass media and public relations: historical analysis, case studies, content analysis, readership studies, audience studies, field surveys and experimental design. (Prerequisite: MASC101 & STAT101)

MCPR 510: WRITING FOR MASS MEDIA & PUBLIC RELATIONS: (3-0-3)

Intensive researching, writing and reporting of in-depth news articles for both print and electronic media demands from students that they develop their own journalistic style to explore and report issues. Students prepare and develop story ideas on behalf of businesses, governmental departments and other public institutions. Students gain
experience conducting background research and composing brochures and prospectuses.

**MCPR 520: RESEARCH METHODS IN MASS COMMUNICATION & PUBLIC RELATIONS: (3-0-3)**

This course covers qualitative and quantitative methodologies for research in the field of mass communications and public relations. It covers commonly used methods of social research applicable to the field and focuses on developing skills to evaluate research critically and to empower the student to conduct his/her own major research project. Among the techniques imparted are search strategies and techniques for accessing information sources (both electronic and print) and for evaluating the outcomes of such searches. In addition to topics of research design and scientific logic, the course introduces a variety of statistical methods of analysis with a view to focusing on collecting, organizing, and using data as an aid to assessing information systematically. Research and information gathering methods span research design, data mining, data interpretation, reporting and strategic use of research findings.

**MCPR 525: SEMINAR IN CONTEMPORARY COMMUNICATION RESEARCH: (3-0-3)**

The course offers a survey of research in mass communication and public relations and discusses the various trends in the two fields. In particular, it focuses on the most recent developments in the field of communication research in order to help students to use the modern theories in the writing of research papers. (Prerequisite: MASC 511)

**MCPR 530: PUBLIC OPINION FORMATION AND MEASUREMENT: (3-0-3)**

This course explores the literature on public opinion. Perception of the social and political environment and of the climate of opinion, opinion distribution and expression, and conformity are investigated. Recent trends in public opinion research and measurement and its relationship to democracy are explored. Students poll public opinion on topics of contemporary relevance.

**MPRM 498: RESEARCH METHODS IN MASS COMMUNICATION & PUBLIC RELATIONS (3-0-3)**

This course aims to provide students with new skills that enable them to use the library and to plan and deal with references in order to write a scientific research. It teaches them the skills required of to deliver presentations in a practical and critical manner and the method of analysing some projects as case studies and in accordance with the rules and procedures of scientific research. (Prerequisite: MCPR 360)
PHRM 498 – RESEARCH METHODS IN PHYSIOTHERAPY: (3-0-3)

This is an introductory course on research methodology which is delivered through a combination of workshops, lectures, IT labs and seminars. The main topics covered are: basic research methods in the health sciences, utilizing library resources, literature searching and appraisal, report writing, presentation skills and professional ethics. (Prerequisite: STAT 201).

PHOT 101: INTRODUCTION TO DIGITAL PHOTOGRAPHY: (2-2-3)

The course introduces the art and craft of digital photography. Students will practice how to use and get the best from their cameras and the main menu features. Emphasis is placed upon improving the quality of the image produced within the camera by expanding the user’s awareness of the camera functions and the possibilities provided by a sound knowledge of the features and basic imaging theory.

PHTH 121: GENERAL ANATOMY: (2-2-3)

Basic anatomy and structure of the human body oriented in system basis. The course integrates concepts of anatomical terms and references of motion, gross anatomy of human body cells, tissues, organs, basic function, vascular, nervous, muscular-skeletal, hearing, vision and other human body structures and systems.

PHTH 211: GENERAL PHYSIOLOGY: (2-2-3)

The normal function of body structures are taught on system basis. The course includes the function of different human cells, tissues, organ and systems. This includes abnormal functions, immune system and defence mechanisms, blood circulation, exercise physiology, muscular-skeletal mechanism, and neurophysiology. The course includes description of normal biochemical references and values. (Prerequisite: PHTH 121)

PHTH 212: MUSCULOSKELETAL ANATOMY & PHYSIOLOGY: (5-2-6)

This course introduce students to anatomy, physiology, biomechanics and pathos-mechanics including structure and function of joints, ligaments, capsules, articular cartilages, nerves, muscles and tendons. This will include overview of general tissue structure followed by specific body region of functional anatomy with clinical correlation in physical diagnosis and medical and surgical conditions with the use of actual clinical cases pertinent to all aspects of the organ systems. (Prerequisite: PHTH 121)

PHTH 213: INTRODUCTION TO EXERCISE PHYSIOLOGY: (3-0-3)

This course describes the series of physiological functions, reactions and biochemical principles involved in creation, maintenance and malfunction of human movements. The course includes neurophysiological transmission, neural control, neuromuscular reaction, muscle fibre type and functions, intra-muscular enzymatic process, the mechanism of muscle fatigue and recovery, muscular response to stress factors, muscular adaptation to force and endurance training and other related topics in muscular physiology and function. (Prerequisite: PHTH 121)
**PHTH 214: INTRODUCTION TO BIOCHEMISTRY: (3-0-3)**

Survey of basic principles of biochemistry and molecular biology, emphasizing broad understanding of chemical events in living systems in terms of metabolism and structure-function relationships of biologically important molecules. (Prerequisite: PHTH 121)

**PHTH 221: BIOMECHANICS: (3-0-3)**

Introduction to the application of laws of physics on human body movements. The course includes description of static and dynamic laws on human motion, levers and types of forces acting on human transfer and function, types of human joints, mechanics of therapeutic exercises, abnormal force application and injury mechanism, diagrammatic representation and measurement of forces, momentums, action-reaction theories, friction definition and measurement, and biomechanical terms and values. (Prerequisite: PHTH 212)

**PHTH 222: NEUROANATOMY & PHYSIOLOGY: (2-2-3)**

This course orients the student on the neuro-physiological and neuro-anatomical basis of human body movement, function and motor control of the muscular-skeletal system. This include topics in neuro-physiology, neuro-transmission, mechanism, cerebral functions and control, pyramidal and extra-pyramidal function, peripheral nerve functions and neuro-muscular transmission, common pathos-neuro-physiological conditions, skull and maxilla-facial anatomy and other related topics. (Prerequisite: PHTH 211 & PHTH 212)

**PHTH 223: INTRODUCTION TO RADIOLOGY AND PATHOLOGY: (2-2-3)**

The course introduces students to the principles of reading, interpretation and clinical utilization of radiological and laboratory results. The topics include principles of radiological imaging, muscular-skeletal radiology, common orthopaedic conditions, radiology, neurological imaging, MRI imaging techniques, CT imaging, biochemical lab investigations, haematological tests and values, histopathology investigations, microbiology techniques, and other topics in radiology and pathology. (Prerequisite: PHTH 212)

**PHTH 224: PRINCIPLES OF ELECTROTHERAPY: (2-2-3)**

The principles of electrotherapy modalities are discussed in this course including definition and contents of electrical power, flow, measurement, electron theory and principle, energy generation, emission, transmission and radiation. Building on these concepts, the course teaches the physiological effects and interaction of the electrical and non-electrical sources of energy pertaining to different human body tissue. The means to deliver different electrotherapy modalities are included with their indication, effects and contra-indications. (Prerequisite: PHYS 101)

**PHTH 225: PSYCHOLOGICAL ASPECTS OF DISABILITY: (3-0-3)**

This course aims to prepare participant with the social and psychological aspects of disease and disability. The course includes topics of personality types, personality changes and adaptation to disease, disability and motivation of rehabilitation, denial and acceptance phases of disability, micro-and macro-economics of diseases and disability, and other related topics. (Prerequisite: PHTH 212)
**PHTH 226: BASIC CLINICAL PRACTICE: (0-12-6)**

This fully practical clinical course aims to introduce the students with clinical settings and environments. The course starts with training in patient handling and assistance, physiotherapy equipment and machinery operation and maintenance, the therapist-patient relationship, patient assessment principles, electrotherapy applications, individual and group gymnastics and therapeutic training, hydrotherapy, clinical reporting and documentation, reading and filing of attached medical documents, safety issues in physiotherapy, patient motivation and follow-up and other related clinical physiotherapy principles.  
(Prerequisite: PHTH 211 & PHTH 212)

**PHTH 312: ORTHOPEDIC, SPORTS & RHEUMATOLOGY PHYSIOTHERAPY: (2-2-3)**

The principles of physiotherapy for muscular-skeletal, sports and rheumatologically diseases and injuries are taught. Joints and bone diseases are presented in systematic approach followed by physiotherapy assessment, indications and contra-indications of physiotherapy treatment. Pre and post-operative physiotherapy procedures are discussed for orthopaedic surgical cases. Practical training in assessment techniques, gait training, muscle testing and lower extremities orthotics is included. (Prerequisite: PHTH 221, 223 and 226)

**PHTH 313: MANIPULATIVE PROCEDURES: (2-2-3)**

This course includes the anatomical, biomechanical and physiological basis of orthopaedic manipulative procedures. This includes indications, contra-indications, physiological and therapeutic effects of the common manipulative procedures in a systematic approach. The course will also include introduction in mobilization theory, upper extremities techniques, lower extremities, cervical spine, thoracic spine techniques, lumbar and sacra-iliac mobilization and orientation in common schools of thought in this field. Practical training modules are included to give the students experience in handling such manoeuvres.  
(Prerequisite: PHTH 221, PHTH 223 and PHTH 226)

**PHTH 314: PRINCIPLES OF THERAPEUTIC EXERCISE: (2-2-3)**

This course is designed to teach the students on the basic principles of therapeutie exercise. Emphasis is given on assessment and treatment protocols in the different fields of therapeutic exercise particularly range of motion, progressive resistive, stretching, peripheral joint mobilization exercise, McKenzie techniques, nags and snags, The course also focus on the principles of soft tissue healing and the protocols that are necessary for proper therapeutic exercises. The course is reinforcing with practical components.  
(Prerequisite: PHTH 213, PHTH 221 and PHTH 226)

**PHTH 315: CLINICAL: ORTHOPEDIC MEDICINE AND SURGERY: (2-2-3)**

Common orthopaedic and rheumatologically diseases and injuries are included in this course. The main topics are fracture types and complications, fractures closed and open reduction techniques, joint arthritis classification and diagnosis, systemic inflammatory diseases, auto-immune disorders affecting bones and joints, peripheral nerve injury types and management, total joint replacement, congenital muscular-skeletal diseases, soft tissue and sports injuries and other related topics. The course is reinforced with clinical rounds with the orthopaedic consultants and senior physiotherapist. (Prerequisite: PHTH 223 and PHTH 226)
PHTH 316: CLINICAL ORTHOPEDIC, SPORTS & RHEUMATOLOGY PHYSIOTHERAPY: (0-8-4)

This fully clinical course introduces the students with clinical skills in assessment and physiotherapy management of patients with musculo-skeletal, sports and rheumatological diseases and injuries including surgeries. This course focuses on therapist-patient relationship, patient assessment principles, manipulations applications, individual and group gymnastics and therapeutic training, mobilization techniques, post-operative orthopedic rehab and other topics in fields of musculo-skeletal, sports and rheumatological physiotherapy techniques. (Prerequisite: PHTH 223 & PHTH 226)

PHTH 321: THEORIES OF CARDIOPULMONARY PHYSIOTHERAPY: (2-2-3)

The principles of physiotherapy for cardio-pulmonary diseases are taught. Respiratory and heart diseases are presented in systematic approach followed by assessment, indications and contra-indications of physiotherapy treatment. Pre and post-operative physiotherapy procedures are discussed for cardio-pulmonary surgical cases. Practical training in assessment techniques, postural drainage, Intensive Care Unit, COPD rehabilitation and post-operative heart rehab are included. (Prerequisite: PHTH 226)

PHTH 322: MEDICAL PHYSIOTHERAPY: (3-0-3)

This course is designed to teach the knowledge of the different medical conditions seen in the practice of physiotherapy. It focuses on the ethology, pathophysiology, epidemiology, and symptomatology of conditions such as burns, amputation, cancers, AIDS, immobilization syndrome, spinal cord injuries and geriatric conditions. Medical and physiotherapy management will be emphasized during discussion of each condition. (Prerequisite: PHTH 226)

PHTH 323: CLINICAL: CARDIOPULMONARY MEDICINE AND SURGERY: (2-2-3)

This course orients the student on common cardiac and pulmonary diseases with the focus on assessment, diagnostic procedures, pathology and treatment. The main topics in the course include principles of cardio-pulmonary and circulatory physiology and anatomy, pulmonary gases exchanges, ischemic heart diseases, chronic obstructive pulmonary disorders (COPD), allergic pulmonary diseases, cardio-pulmonary treatment in intensive care units, common pulmonary surgical procedures, principles of heart surgeries, and other related topics. The course is reinforced with clinical rounds with the cardiologist/pulmonologist consultants and senior physiotherapist. (Prerequisite: PHTH 226)

PHTH 324: CLINICAL: CARDIOPULMONARY & MEDICAL PHYSIOTHERAPY: (0-8-4)

This course includes practical application of cardiopulmonary and medical physiotherapy principles in a supervised clinical setting. The purpose of the course is that the student masters such techniques and be competent in cardio-pulmonary rehabilitation. Topics of the course includes post-operative cardio-pulmonary rehabilitation, ischemic heart disease physiotherapy, postural drainage techniques, COPD rehabilitation, ICU patient management, respiratory exercise techniques and applications and related topics in cardio-pulmonary rehabilitation. (Prerequisite: PHTH 226)
PHTH 325: ORGANIZATION AND ETHICS IN PHYSIOTHERAPY: (3-0-3)

This basic course aims on orientation of the student in topics related to health care planning, delivery system and ethical issues in the field of physiotherapy. The main topics in the course are a historical prospective of health care delivery, administration of acute and rehabilitation settings, health care delivery in non-clinical settings, health care delivery in rural regions, economics of the health care system, health insurance economics, private funding, delivery of health care, patient rights, medico-legal aspects of health care, malpractice issues, organization of physiotherapy profession in the community and other related topics. (Prerequisite: PHTH 226)

PHTH 412: THEORIES OF NEUROLOGICAL PHYSIOTHERAPY: (2-2-3)

The course includes principles of physiotherapy for neurological diseases and injuries. Central and peripheral nervous system diseases are presented in systematic approach followed by assessment, indications and contra-indications of physiotherapy treatment. Pre and post-operative physiotherapy procedures are discussed for neurosurgical cases. Practical training in assessment techniques, neurophysiological testing, Bobath and PNF techniques are included. (Prerequisite: PHTH 222 & PHTH 226)

PHTH 413: CLINICAL NEUROLOGICAL MEDICINE AND SURGERY: (2-2-3)

This course includes topics in diagnosis, assessment, clinical presentations of common neurological diseases and surgery. This includes a review of neuro-pathology, intra-cranial diseases, central nerve system diseases, peripheral nerve system diseases, spinal cord diseases and injuries, traumatic head injury, common neurosurgical procedures. The course is reinforced with clinical rounds with the neurologist consultants and senior physiotherapist. (Prerequisite: PHTH 222 & PHTH 226)

PHTH 414: CLINICAL: NEUROLOGICAL PHYSIOTHERAPY: (0-8-4)

This is a clinical module that includes training of the students on neurological physiotherapy techniques in clinical settings. The course includes training in cases of hemiplegia’s, paraplegias, spinal cord injuries, Parkinson's disease, progressive neurological diseases, post-operative neurological conditions and other related topics. By the end of the course the student must be able to independently apply physiotherapy techniques on neurological conditions. (Prerequisite: PHTH 222 and PHTH 226)

PHTH 415: PHARMACOLOGY: (3-0-3)

This basic course in pharmacology aims to introduce students to pharmaceutical agents used in common diseases. The course includes an introduction to digestive system physiology and mechanisms, major drug groups, actions and precautions of NSAID, central muscle relaxants, beta-blocker indications, analgesics and their pharmacological effects, pharma-economics and other related topics. (Prerequisite: PHTH 214)

PHTH 421: CLINICAL: PEDIATRIC PHYSIOTHERAPY: (0-8-4)

This is a fully practical course in a clinical settings aims to train students in paediatric physiotherapy skills. The training includes providing physiotherapy techniques for patient with cerebral palsy, neuro-developmental abnormalities, congenital anomalies, Erb’s palsy.
and other paediatric conditions.
(Prerequisite: PHTH 222 and PHTH 226)

**PHTH 422: THEORIES OF PEDIATRIC PHYSIOTHERAPY: (2-2-3)**

The course includes principles of physiotherapy for pediatric diseases and injuries. Pediatric and juvenile diseases, congenital and acquired malformations are presented in systematic approach followed by assessment, indications and contra-indications of physiotherapy treatment. Pre and post-operative physiotherapy procedures are discussed for pediatric surgical cases. Practical training in assessment techniques, cerebral palsy testing, and Bobath and PNF techniques are included. (Prerequisite: PHTH 222 & PHTH 226)

**PHTH 423: CLINICAL: PEDIATRIC MEDICINE AND SURGERY: (2-2-3)**

The course covers diagnosis, clinical presentation and treatment of common pediatric cases. The main topics in the course are introduction to genetics, embryology, intra-uterine malfunctions, neonatology, cerebral palsy types and diagnosis, Erb’s palsy and other peripheral neonatal injuries, orthopedic pediatric developmental disorders, normal physiological developments and common pediatric surgical conditions. The course is reinforced with clinical rounds with the pediatric consultants and senior physiotherapist. (Prerequisite: PHTH 222 & PHTH 226)

**PHTH 424: CLINICAL: COMMUNITY PHYSIOTHERAPY: (0-6-3)**

This is a fully practical course in a community based clinical settings that address physiotherapy service delivery in various community-based settings such as domiciliary and fixed location private practice, schools and community centres. The course will cover the process of developing professional physiotherapy service, health promotion and how to adapt physiotherapy services in the community according to cultural and socio-economic needs. (Prerequisite: PHTH 315 & PHTH 323)

**PHTH 425: OCCUPATIONAL HEALTH & ERGONOMICS IN PHYSIOTHERAPY: (2-2-3)**

This course trains student on common role of the physiotherapist in communities other than conventional hospitals. This include the function of the physiotherapist in prevention of injuries, workplace design and analysis, mechanism of repeated minor trauma, overuse and stress related injuries, muscle and other soft tissue failure and injury, the concept of good posture, principles of patients and non-patients health education and motivation and other related topics. (Prerequisite: PHTH 325)

**PHTH 499: PROJECT IN PHYSIOTHERAPY: (0-6-3)**

Each student will be required to select and complete a research project in the field of physiotherapy, under the supervision of a Faculty member. Assessment will take the form of a written report and an oral presentation. (Prerequisite: PHRM 498)

**PHYS 101: GENERAL PHYSICS I: (3-0-3)**

This course covers units and measurements, vectors, Newton’s laws of motion, projectile motion, work and energy, impulse and momentum, rotational dynamics, equilibrium of a rigid body and periodic motion. (Prerequisite: MATH 050 or 052 or 055)
PHYS 121: GENERAL PHYSICS II: (3-0-3)

This course introduces principles of circuits including electric charges and fields, Coulomb’s and Gauss’s laws, electric potential, capacitors, direct current circuits, Kirchoff’s rules, magnetic field and flux, ampere’s law, induced emf, Lenz’s law, mutual and self inductance AC circuits, and RLC circuit. (Prerequisite: PHYS 101)

PSYC 101: INTRODUCTION TO PSYCHOLOGY: (3-0-3)

After providing a brief history of milestones in the development of psychology, this course introduces Psychology as a scientific discipline and overviews research methods used by psychologists as a means to understand human development at each stage of life, the nature of personality and human behavior. major psychological disorders are discussed and the rudiments of social psychology outlined

PREL 101: INTRODUCTION TO PUBLIC RELATIONS: (3-0-3)

A survey of the roles and responsibilities of the public relations professional in private and public organizations. The course examines the importance of audience research in public relations program planning, the difference of public relations from advertising, and the use of traditional publicity tools like press release and press kits to reach targeted audiences. It explores the use of the internet to reach key stakeholders and as a distribution channel for publicity. The course also emphasizes the importance of ethics, integrity and relationship building as cornerstones of public relations.

PREL220: PUBLIC OPINION: (3-0-3)

Public opinion formation, the basic elements involved, media role, its role in democratic societies, and the social role of communication in attitudinal change are the core of this course. (Prerequisite: MASC101)

PREL240: ADVERTISING: (3-0-3)

A survey of advertising including its history, functions, theories, ethics, and relationship to modern organizations. The course sheds light on advertising practices in agencies and organizations, including media analysis, buying and coordination as well as analyses of effective agency functions, structure and relationships.

PREL 320: ORGANIZATIONAL COMMUNICATION & CONSUMER BEHAVIOR (3-0-3)

This course explores how to enable corporations to use the tools of communication to advance their missions, help resolve problems and seize opportunities in such areas as employee motivation, customer loyalty, shareholder understanding, new media relationships and community acceptance. Communication management between organizations and their employees, customers, communities, owners, the government and the media receive special attention. Studying consumer behavior is a major issue. (Prerequisite: MAGT121)
PREL340: INTEGRATED MARKETING COMMUNICATION: (3-0-3)

Students are exposed to advertising, public relations, direct marketing, sales promotion and e-commerce marketing in the context of the IMC process. The course establishes a framework for managing communications that encompasses customer orientation, customer acquisition, customer retention, brand strategy, cross-media integration and measurement of communication effects. In addition, students develop skills in creative message strategy and learn to execute strategy through integrated communications. (Prerequisite: MAKT201)

PREL350: THE PRACTICE OF PUBLIC RELATIONS: (3-0-3)

This course is designed to introduce students to the contemporary practice of public relations, the nature and history of the profession and the theoretical foundations of contemporary practice of public relations. Within this framework, topics covered include: the identification of internal and external publics, descriptions of core public relations processes, and the tools of public relations. Finally, through the use of case study analysis, the student is introduced to corporate image creation and crisis management. (Prerequisite: PREL101)

PREL360: PUBLIC RELATIONS IN BANKS & FINANCIAL INSTITUTIONS: (3-0-3)

This course is specifically designed to meet the needs of Bahraini society. The practice of public relations and communication activities in banks and other financial institution is investigated through case-studies. (Prerequisites: PREL101 & 240)

PREL 365: MEDIA PRODUCTION FOR PUBLIC RELATIONS (2–2–3)

This course covers the basic media techniques in print and broadcast productions for public relations. It deals with production of documentaries, brochures, pamphlets, and films to enhance the organization’s image. This course includes also the use of Web site, and online media relations such as electronic mail, to promote the organization image and foster its relations with its public. (Prerequisite: PREL 350).

PREL 375: SPECIALIZED PUBLIC RELATIONS (3–0–3)

The course explains crisis and identifies its communication dimension, and focuses on proactive planning to deal with the crises situation from a Public Relations perspective. This course covers also the practice of public relations in various fields and specific organizations. It looks at special users and special needs, the use and application of public relations in business, corporate and public affairs, corporate financial relations, health institutions, education, government and citizens. (Prerequisite: PREL 101).

PREL370: PRODUCTION OF PROMOTIONAL MATERIAL: (2-2-3)

This course deals with design and production of public relations and advertising material including copy preparation, graphics, typography, photography and computer applications for various print, electronic and audio-visual media. (Prerequisites: PREL101 & 240)
PREL440: INTERNATIONAL COMMUNICATION: (3-0-3)
This is meant to present an overview of world communication systems. Topics include: newsgathering agencies, news and information flow, and media imperialism. (Prerequisite: PREL350)

PREL460: SPECIAL EVENTS AND PROTOCOL: (3-0-3)
In today’s world communication and public relations activities have become essential to create and establish mutual understanding. This course is designed to help communication and public relations students participate as active members in special assignments designed to fulfill this goal. Protocol rules are applied especially when politicians are involved. (Prerequisite: PREL350)

PREL 499: PROJECT IN PUBLIC RELATIONS: (0-6-3)
Topics vary in accordance with the instructor and interests of the student. Approval of the department head is necessary. (Prerequisites: MPRM 498)

PREL 500: CONTEMPORARY PUBLIC RELATIONS: (3-0-0)
This course focuses on understanding the objectives and strategies that shape the type of information delivered to specific audiences. Students again essential insight and skills in diverse fields as: human relations, psychology, customer relations, advertising, labor relations and knowledge management. In a global business environment rocked by corporate scandals, public relations project a consistent, well-informed ethical voice for institution to preserve intact their corporate images and reputations. This course explores how information can be conveyed to diverse audience to create perceptions and project positive images that increase corporate value or at least to limit damages to corporate value during crises. The issue of hoe institutions, particularly corporations, build and retain relations of credibility with the news media is addressed.

PREL 501: BASIC CONCEPTS IN PUBLIC RELATIONS: (3-0-3)
This course introduces a scientifically-based public relations concept and sheds light on its historical development. It deals with the definition of public relations, its origins and evolution through history and the relationship between the concept of public relations and other concepts. It also identifies the functions and objectives of public relations and the means of communication used to achieve their goals.

PREL511: MODERN THEORIES IN PUBLIC RELATIONS: (3-0-3)
The course addresses the theoretical frameworks for public relations and models related to the exercise of public relations. It explores the cognitive and behavioral theories, with emphasis on how to apply these theories to the practice of public relations in different organizations, as well as the use of various means of communication in the field of public relations.
PREL 512: THE ART OF ADVERTISING: (3-0-3)

The course focuses on the definition and characteristics of advertising and its advantages and disadvantages. It also covers topics such as communication activities and its relationship to advertising, advertising media (printed, audio, visual), advertising agencies, the modern techniques used in the design and production of advertising messages, the technical aspects of advertising design, and the use of design programs in advertising.

PREL 515: PUBLIC RELATIONS AND INFORMATION CAMPAIGNS: (3-0-3)

This course provides a comprehensive overview of concepts, analytical techniques and methods to assess audiences, target markets and vital trends requisite to develop a public relations strategy in the context of a complex and rapidly changing world and media environment. The course explores contrasting public relations strategies in international settings employed by multinational corporations, governments and interest groups. Students apply communication and public relations methodologies to plan public relations campaigns.

PREL 516: MEDIA PRODUCTION FOR PUBLIC RELATIONS: (2-2-3)

This course covers the basic media techniques in print and broadcast productions for public relations. It deals with production of documentaries, brochures, pamphlets and films and focuses on the use of web site and online media, such as electronic mail, to promote the organization’s image and enhance its relations with the public.

PREL 520: PUBLIC RELATIONS MANAGEMENT: (3-0-3)

This course develops and strengthens communication management skills through assimilating the public relations function with corporate goals and activities. In addition, students analyze how management of information shifts the way public relations professionals influence various publics consonant with corporate goals and activities. Students are expected to investigate the roles of various public relations practitioners in applying the techniques of public relations to support management strategies and corporate decision-making. At the end of the course, students create a 5-year corporate image campaign for a chosen company that positions the company in a favorable position from the vantage-point of its corporate stakeholders in accordance with corporate long-term strategy.

PREL 535: INTEGRATED MARKETING COMMUNICATION: (3-0-3)

This course introduces students to marketing communication tolls, strategies, techniques and media used by practitioners to promote their products, ideas and services. The course emphasizes how various marketing communication areas work together to create a cohesive message. This course inculcates how to best mix marketing communication tools in a strategic integrated plan for using the media in all marketing communication areas.

PREL 545: THE ART OF PUBLIC RELATIONS: (3-0-3)

This course provides students with the advanced skills necessary to develop creative ways to prepare, present and direct public relations messages to both specific publics and the mass media. Alternative strategies and techniques to address contrasting media standards
are presented, debated and applied. Special attention is accorded to social responsibility in handling issues related to public and community interests. Illustrative case studies drawn from the practice of public relations in different countries are analyzed. Students learn how to prepare for and deliver press conferences, to issue various kinds of press releases and to design public relations advertisements.

**PREL 550: THE PRACTICE OF PUBLIC RELATIONS: (3-0-3)**

This course surveys the entire practice of public relations spanning roles, ethics and laws of public relations, working with printers, publishers, designers, photographers and film makers; conducting exhibitions and fairs; working with the media; understanding the impact of recent technologies on public relations practice; and planning, programming, assessing and evaluating projected public images and public relations campaigns. Students conduct individualized research on a variety of topics as addressed in this course.

**PREL 560: ORGANIZATIONAL COMMUNICATION AND CORPORATE IMAGE: (3-0-3)**

A comprehensive analytical study of organizational communications behavior drawing on a variety of social science theories is provided to enhance the students’ understanding of the practice of public relations and communications in different organizations. In this course, students monitor the political, social and economic environment, on both the national and international levels, with a view to assessing issues relevant to corporate public affairs and to the formulation of communications strategies. Students engage in advocacy, constituency communication and corporate image creation and modification.

**PREL 570: SPECIAL EVENTS PROTOCOL: (3-0-3)**

A primer on planning, preparing for and delivering effective communications for special events, this course imparts to students a complex array of oral, audio and visual presentation skills. In particular, this course acquaints students with the necessary protocol to manage events involving VIPs and Royal personages. By role-playing, students experience and practice the application of protocol to public relations activities involved in special events.

**PREL 580: PUBLIC RELATIONS AND CRISIS MANAGEMENT: (3-0-3)**

This course provides students with the necessary tools to review and diagnose major crises affecting corporations, governments and other institutions through case analyses of different types of crises: technology, confrontation, natural disasters, skewed values, deception and misconduct. Local, national and international cases are presented and discussed. Students are encouraged to evaluate appropriate management decisions, actions and communications before, during and after a crisis through the following stages: monitoring, analysis, strategy determination and implementation. The course focuses on advances in sophisticated management techniques related to the crisis and risk management functions of a public relations unit. Wide varieties of case studies on crisis management are introduced and students are expected to participate in a crisis management simulation.

**PREL 590: SPECIAL TOPICS IN PUBLIC RELATIONS: (3-0-3)**

Topical content in the field of public relations varies with the background of the instructor and the students’ areas of interest. Students are required to carry out small-scale field studies on designated topical areas of public relations and discuss their findings.
**PREL 591: SPECIAL TOPICS IN ADVERTISING: (3-0-3)**

Topics span recent developments in electronic media and socio-economic, political and cultural aspects of society. Course content varies with the background of the instructor and the interests of the students.

**PREL 598: PROJECT DISSERTATION IN PUBLIC RELATIONS: (0-6-3)**

The student conducts a study on a topic in the field of public relations under the supervision of a faculty member. The final written manuscript which includes problem identification, methodology, research evaluation and discussion of the findings is subject to a panel evaluation. (Prerequisite: MCPR 520)

**PREL 599: DISSERTATION IN PUBLIC RELATIONS: (0/24/12)**

A research focused study in the field of public relations which aims to draw on practical data to assess critically a specified area or topic. The dissertation engages the student in a progressive course of intellectual discourse involving problem identification, methodology, research, evaluation and recommendation that culminates in the production of manuscript subject to public defense. (Prerequisite: MCPR 520)

**SOCI 101: INTRODUCTION TO SOCIOLOGY: (3-0-3)**

This course introduces students to the fundamental concepts and methods of sociology, the scientific study of group behavior in terms of social interactions and processes. Such aspects as social structure, class stratification, cultural aspects of social organization, gender issues, ethnicity, social norms and behavioral patterns are among the issues covered in this introduction.

**SOCI 102: SOCIAL PSYCHOLOGY: (3-0-3)**

This course introduces students to the analysis of the social basis of behavior as a key to understanding the social world. This course deals with topics spanning the gamut of: social interaction, social self, social cognition, social perception, social attitudes, social influence and persuasion, group processes and leadership.

**SPAN 101: INTRODUCTION TO SPANISH I (3-0-3)**

A practical language course which aims at familiarizing students with the basic rules of pronunciation, reading, speaking, writing, and listening comprehension. The course material focuses on developing students’ ability to understand and express Spanish in daily conversations.

**SPAN 102: INTRODUCTION TO SPANISH II (3-0-3)**

A continuation of SPAN 101 which aims at further developing the students’ skills in speaking, reading and writing. (Prerequisite: SPAN 101).
STAT 101: INTRODUCTION TO STATISTICS: (3-0-3)

An elementary course that begins by familiarizing the student with new concepts as applied to extraction of meaningful information from random sets of data. It covers descriptive statistics and leads on to frequency and its distribution, variance and standard deviation, probability, expected values, discrete and continuous probability distributions, correlation and regression. (Prerequisite MATH 050 or 052 or 055)

STAT 201: MEDICAL STATISTICS: (3-0-3)

This course starts with an application of elementary statistics to basic principles and methods of epidemiology and then moves to more sophisticated analysis encompassed in medical statistics. The emphasis will be on the design and interpretation of epidemiological studies. Appropriate statistical methods will be integrated with the main epidemiological content, and practical sessions will make use of relevant computer software. (Prerequisite: STAT 101)

STAT 202: BUSINESS STATISTICS: (3-0-3)

This second course in statistics imparts additional knowledge of statistical theory that is important for application in business and economics. Topics span: correlation analysis, linear regression, chi-square tests and analysis of variance. Special attention is placed on survey methodology. An introduction to non-parametric test is provided. The course uses statistical software, SPSS and Minitab, for presentation and analysis of data. (Prerequisite: STAT 101)

STAT 301: APPLIED STATISTICS: (3-0-3)

A third course in statistics covers further topics in statistics such as sampling distribution of the mean, point estimation, interval estimation, testing of hypotheses for single population and two population means, and tests for proportions and variances, power functions, time series forecasting and multiple regression. In addition, non-parametric tests receive extensive coverage. Applications to finance, marketing and business research are presented with students obtaining opportunity to develop further skill in the employment of statistical software, SPSS and Minitab, in analysis. (Prerequisite: STAT 201 or STAT 202)

STAT 302: APPLIED PROBABILITY (3-0-3)

The course introduces probability notions such as random variables and probability distributions, expectation, moment-generating functions, functions of random variables and transformation. In addition, applications of probability to areas such as reliability theory including parallel and series connections and the basic single server queuing system M/M/1 are also discussed. (Prerequisite: MATH 202)

VIDEO 101: VIDEO PRODUCTION: (2-2-3)

The course teaches the basics of video camera use through hands-on technical training. Topics include the history and methodology of video production.