

MS Program in Microelectronics and VLSI Design

Course Structure

	Code	Course Name	Credits*
BRIDGE	MVD 001	Introduction to Circuit Theory	0
	ESD 001	Computer Architecture	0
	MVD 002	Introduction to Logic Design	0
	NTC 002	Computer Networks	0
	ESD 002	Signals and Systems	0
FOUNDATION	MVD 501	Overview of Microelectronics Technology	1
	MVD 502	Electronic Device Physics and Modeling	3
	MVD 503	Microelectronics Fabrication Technology	3
	MVD 504	Digital IC Design	3
	MVD 505	Analog IC Design	3
CORE	MVD 601	ASIC Modeling	3
	MVD 602	System on Programmable Chip Design	3
	MVD 603	Functional and Formal Verification	3
	MVD 604	ASIC Design Flow and CAD for VLSI	3
	MVD 605	PCB Design Technology	2
	MVD 606	Research Study	3
ADVANCED	MVD 701	Microcomputer Architecture Modeling	3
	MVD 702	Logic Synthesis and Optimization	3
	MVD 703	Layout Synthesis and Optimization	3
	MVD 704	Testing and Design for Testability	3
	ESD 704	Technology and IP Management	1
	MVD 705	Microelectronic Packaging	3
	ESD 705	Digital Signal Processing with FPGA	3
	MVD 706	Chip-Multiprocessor Architecture	3
ELECTIVES	MVD 801	Low Power IC Design	3
	MVD 802	Mixed Signal IC Design	3
	MVD 803	RF IC Design	3
	MVD 804	Embedded System Design around Chip-Multiprocessor Architectures	3
	MVD 805	MEMS	3
	MVD 806	Nano Technology	3
PROJECT	MVD 901	Mini Project	2
	MVD 902	Project	18

* 1 Credit Hr = 16 Class Hrs / 32 Lab Hrs in a semester

MBA Program in Management

With specialization streams in:

General Management, Financial Management, Marketing Management, Human Resource Management and Production and Operations Management.

"The real voyage of discovery consists not in seeking new lands, but in seeing with new eyes."

- Marcel Proust,
the renowned 19th century French Novelist

Information and communication technology has influenced every aspect of life including the way in which businesses are conducted throughout the world. Consequently, businesses have transformed themselves from the conventional models into technology-enabled models. Business administration has therefore become technology enabled.

Earlier, business education focused on the functional areas of Production, Marketing, HR, and Finance. With the advent and the use of IT in businesses, it has become necessary to manage enterprises from an IT perspective and integrate IT in all the functional areas. Business managers of today are expected to run their business based on skills derived from IT and ITeS coupled with the conventional norms and practices of a business enterprise.

Studies forecast that India's exports will grow to more than US \$ 57 billions by 2008 in the IT services and IT-enabled Services Industry. This industry currently boasts of a turnover of US \$ 20 billion, and will continue to grow consistently. Today, one in four Fortune 1000 companies outsource their software requirements to India. IT enabled Services (ITeS) has emerged as the key IT growth driver with 10.6% of the total IT software and service industry revenues.

The MBA Program at I²IT concentrates on educating, training and developing tomorrow's managers by equipping them with the knowledge base, skill sets and behavioural perspective essential to operate successfully in the IT enabled world of the 21st Century.

Program

This autonomous 24-month, full-time, residential program is designed to address the diverse needs of the 21st century managers of a wide variety of organizations. It provides solid instruction in the basic conceptual areas that form the foundations of modern managerial theory, followed by wide ranging exposure to all the functional areas of business. Entrants will also receive a strong grounding in Managerial Communication and then go on an internship for 2 months. With knowledge gained about the real world through internships and the help of individual faculty counselors each student will choose one of the above streams to specialize in. They will gain in-depth knowledge in their stream of specialization and hands-on practice of some of the latest software applications in that stream. The program will be capped off with analytical modeling and research methodology courses and case studies in Policy and Strategy as well as the specialization stream.

Program Structure

- ▲ Total Semesters: 4
- ▲ Total Credits: Minimum of 78 credits.
- ▲ 8 Foundation courses of 3 credits each for

a total of 24 credits.

- ▲ 5 Core courses of 3 credits each for a total of 15 credits.
- ▲ 7 Advanced courses of 3 credits each for a total of 21 credits.
- ▲ 5 Elective courses of 3 credits each for a total of 15 credits in a specialization area of the student's choice.
- ▲ 1 Internship / Mini-Project of 3 credits.
- ▲ 26 courses of 3 credits each for a total of 78 credits.

Program Pedagogy

- ▲ The student has to select the courses in consultation with guide as indicated. Internal or full-time students should take any courses offered by the institute under the regular on-campus programs.
- ▲ For the working student, if the situation demands, the institute can offer these courses on-campus on weekends or in the evening or through distance education program.
- ▲ The institute reserves the right to decide the mode of delivery of the course and the pedagogy.

Distinctive Features

- ▲ Emphasis on good communication skills
- ▲ Emphasis on group study and team work

- ▲ Hands-on exposure to Enterprise Resource Planning software applications
- ▲ Hands-on exposure to software applications in specialization stream
- ▲ Development of analytical and presentation skills
- ▲ Extensive case studies
- ▲ Diverse pedagogical approaches including traditional lectures, laboratory exercises, field work, internship, guided research and the case method.
- ▲ Students with a quizzical eye and a questioning mind will find this program most rewarding.

Eligibility

Graduates with any recognized Bachelors Degree of minimum three years duration in any field with at least 60% marks at the graduation level. Graduates in Commerce, Economics, Mathematics, Statistics, the Sciences, Engineering and Technology are preferred. Proficiency in C / C++ programming will also be very useful.

Program Commencement

The program commences in July / October.

Selection Process

The selection of an applicant for the course

is based on the following:

- ▾ Application forms shall be scrutinized for academic profile in line with the eligibility criteria
- ▾ Scores received at the Graduation level
- ▾ Scores received at the "Accepted Qualifying Examinations" like GRE / GMAT / XAT / CAT / GATE & Performance in the Entrance Test
- ▾ Personal Interview

Evaluation and Certification

- ▾ Continuous evaluation
- ▾ Balanced assessment based on assignments, examinations and reports.
- ▾ Detailed transcripts
- ▾ Certificate

Placement Assistance

- ▾ Career guidance
- ▾ Active interaction with potential employers
- ▾ Pre-placement facilitation
- ▾ Campus interviews by leading employers as per their convenience and needs

Note on pre-requisites:

The common requirements for all first semester courses are university level mathematics including basic differential and integral calculus, solution of simultaneous linear equations, elementary matrix algebra, proficiency in English to the level of reading, writing and analyzing passages, and basic familiarity with computers including word processing, web navigation and handling e-mail.

In addition, for all courses beyond the first semester the basic pre-requisite is the successful completion of all first semester courses with a minimum of 65% marks in each course and an overall average of 70% in all first semester courses. Students failing to meet this requirement may have to repeat their first semester before being allowed to proceed further.

Basic Course

ICOM001: LIFE SKILLS DEVELOPMENT

This basic course prepares students for the rigors of the masters' level Program and professional careers that will follow. The course is divided into 9 sections, which will be conducted throughout the Program.

The Program stresses on: communication and presentation, leadership development, working in teams, time management,

negotiation skills, stress management through yoga, multicultural and diversity management and offsite experiential learning. The ultimate objective of this course is to develop individuals with high Intelligence, Emotional and Spiritual Quotients (IQ, EQ and SQ).

COM002: FOREIGN LANGUAGE (LEVEL 1)

In order to equip students to take up global careers, a choice of foreign languages as a major subject is offered. Medium of instruction is English.

Foundation Courses:

These are all required courses. They prepare the students for all the other courses in the MBAP. Typically, they do not have any other pre-requisites except admission to the MBAP. They are all normally taken in the first semester and have to be successfully completed before the student can progress any further.

MBA 501: FINANCIAL STATEMENT ANALYSIS (3 Credits)

Pre-requisites: Admission to the MBA program or permission of the Instructor.
This course focuses on the service activity designed to gather and communicate financial information about business entities to make informed decisions as to how best to use available resources. Students will be introduced to basic accounting principles and conventions, accounting standards, costing and budgeting, financial reporting and recent developments in accounting. This course will also emphasize the understanding, interpretation and use of important accounting statements such as the Profit & Loss, Balance Sheet, Sources and Application of Funds and Cash Flow Statements.

MBA 502: MICROECONOMICS (3 Credits)

Pre-requisites: Admission to the MBA program or permission of the Instructor.
This course focuses on microeconomics as applied to the firm. Topics include supply and demand curves, price theory, production functions, average and marginal cost curves, equilibrium under perfect competition, monopoly, monopsony, and oligopoly and applications to pricing and production decisions of the firm.

MBA 503: MACROECONOMICS (3 Credits)

Pre-requisites: MBA 502 and admission to the MBA program or permission of the Instructor

This course focuses on macroeconomic theory and policies. Topics include wealth of nations, determination of employment, output, prices, wages, interest rates, national income and GDP, investment, international flows of goods, services and assets, and macroeconomic policy regimes for promoting employment, income and economic growth.

MBA 504: MANAGERIAL COMMUNICATION (3 Credits)

Pre-requisites: Admission to the MBA program or permission of the Instructor.
An in-depth, intensive and practically oriented study of the effective use of Managerial Communication in an organization. Topics include writing skills, presentation skills, group discussion skills, interview skills, soft skills, interpersonal skills, communication in organizational settings, communicating in teams and meetings, group dynamics, business etiquette and cross cultural communication.

MBA 511: MANAGEMENT INFORMATION SYSTEMS (3 Credits)

Pre-requisites: Admission to the MBA program or permission of the Instructor
The course focuses on the principles of business information processing and the role of information systems in contemporary organizations. After a review of the C, C++, and JAVA languages, the emphasis will be on the MIS processes in organizations and the role of support system tools like OLTP, OLAP, DSS, GDSS, ES and EIS.

MBA 531: PRINCIPLES OF MANAGEMENT AND THE BUSINESS ENTERPRISE (3 Credits)

Pre-requisites: Admission to the MBA Program or permission of the Instructor.
An introduction to the principles and practices of management so as to understand the tasks and functions of management in a global environment. Topics include Evolution of management, Functional areas of business, Team concept, MBO, Organization Structure, PERT, JIT, TQM, Quality Circles, Motivation, Business Ethics and policy making.

MBA 541: ORGANIZATIONAL BEHAVIOR (3 Credits)

Pre-requisites: Admission to the MBA program or permission of the Instructor
An introduction to how individuals, groups and structure affect the behavior within organizations and how such knowledge can

be used to improve the organization's effectiveness. Topics include values, attitudes, personality, perception, motivation, leadership, communication, ethics, power and politics and foundations of group behavior.

MBA 561: BUSINESS STATISTICS (3 Credits)

Pre-requisites: Admission to the MBA program or permission of the Instructor.
This course focuses on basic statistics – theory and methods to be applied in most of the other MBA courses that follow. Topics include univariate and bivariate descriptive statistics, elementary probability theory, the Bernoulli, Poisson and Normal data generating processes, the Binomial, Poisson and Normal probability distributions, the concepts of population and sample, elementary sampling theory and methods, population parameters and sample statistics, introduction to estimation, inference and hypothesis testing, and introductory regression analysis.

Core Courses

These courses have one or more pre-requisites. Typically, they are taken in the second semester or beyond.

MBA 611: ENTERPRISE RESOURCE PLANNING I (3 Credits)

Pre-requisites: MBA 501, MBA 511, MBA 531 or permission of the Dean.
This course would enable the students to understand the concept of Enterprise Resource Planning or ERP, its functional modules and their inter-relationships. The managerial and technical issues in planning, designing, implementing, and extending enterprise systems and technologies will be an integral part of the course. Further, the course will include orientation to the use of software for modeling and mapping business processes.

MBA 621: CORPORATE FINANCIAL MANAGEMENT (3 Credits)

Pre-requisites: MBA 501, MBA 502, MBA 531, MBA 561 or permission of the Dean.
An introduction to the fundamental valuation techniques used in finance. Topics include the wealth maximization perspective, time value of money, capital budgeting and project evaluation, introduction to capital markets, risk, security valuation, corporate capital structure and the 'no arbitrage'

argument.

MBA 641: HUMAN RESOURCE MANAGEMENT (3 Credits)

Pre-requisites: MBA 501, MBA 502, MBA 531 or permission of the Dean.
An introduction to the HRM (also known as Personnel Management) function in organizations. Topics include job and content analysis, selection, recruitment, compensation, orientation, training and development of the work force, performance management, workplace and occupational health and safety, industrial relations and their legal framework.

MBA 651: MARKETING MANAGEMENT (3 Credits)

Pre-requisites: MBA 501, MBA 502, MBA 531, MBA 561 or permission of the Dean.
An introduction to the Marketing function in organizations. This course provides exposure to the basic concepts and terminology in Marketing Management – the 4 P's of Marketing, consumer behaviour, segmentation, channels, product life cycle, pricing and marketing strategy. It will serve as a base for other courses in Marketing, which are primarily application oriented in nature.

MBA 661: PRODUCTION AND OPERATIONS MANAGEMENT (3 Credits)

Pre-requisites: MBA 501, MBA 502, MBA 531, MBA 561.
An introduction to the management of the operations function in organizations. Topics include capsule history of the development of operations management, demand management, planning, scheduling, layout, control over quality and quantity of output. Problems of production of both goods and services will be considered. This course will include an introduction to the use of quantitative techniques as an aid to organizational decision making.

Advanced Courses

These courses have one or more pre-requisites. Typically, they are taken in the third semester or beyond.

MBA711: ENTERPRISE RESOURCE PLANNING II (3 Credits)

Pre-requisites: MBA 611.
This course will enable the students to have a hands-on exposure to configuring and running some of the basic and core functional processes. The objective here is to make them understand the importance of business process integration with respect to

MBA Program in Management

the three basic business systems, namely, Accounting, Materials Management and Sales. The students will do a set of exercises using SAP as the ERP platform. The focus will be on the procurement and the sales cycles.

MBA 730: RESEARCH METHODOLOGY (3 Credits)

Pre-requisites: MBA 661 or equivalent. Successful completion of all third semester courses or permission of the Instructor and approval by the Dean.
This course will introduce students to research methodology and statistical research methods. Each student will be required to undertake simultaneously an individual mini research project in his or her area of interest and submit a research report. Topics include research data collection, questionnaire design, survey and sampling methods, research design, analysis of results, research report writing and research ethics.

MBA 733: BUSINESS, GOVERNMENT AND SOCIETY (3 Credits)

Pre-requisites: Successful completion of all courses in the first two semesters of the MBA Program.
This course introduces the students to the nature and role of government in India, the interrelationship between government and business, the potential for conflict, compromise, mutual influence and policy development in both. As a corollary, it examines the broad implications of ethical conduct and behaviour by organizations in the context of individuals, employees, community, society and the polity.

MBA 761: QUNTITATIVE METHODS IN BUSINESS (3 Credits)

Pre-requisites: MBA 501, MBA 502, MBA 561 or permission of the Dean.
An introduction to optimization and decision models in business and economics. Topics include: the generic decision model, general principles of optimization and probabilistic decision making; Linear Programming (LP) – model formulation, graphical solution, the algebra of LP models, SIMPLEX method, duality and sensitivity analysis; transportation, transshipment and assignment models; decision theory, decision tree analysis, and value of information.

MBA 811: ENTERPRISE RESOURCE PLANNING – BUSINESS CASE (3 Credits)

Pre-requisites: MBA 711.

This course will present a comprehensive business case scenario on the configuration of the functional modules of ERP using SAP. The objective here is to improve the students' level of knowledge of business process integration with respect to the more functional processes of the business. The students configure and run additional modules like controlling production and quality thereby creating a virtual firm in the ERP environment in order to enable them to test their business configuration with the basic functional cycles in accounting, inventory, sales, and controlling production and quality.

MBA 837: CASE PROBLEMS IN BUSINESS POLICY AND STRATEGY (3 Credits)

Pre-requisites: Successful completion of the first two semesters of the MBA Program.

This is a capstone course required of all MBAP students in their final semester. It is an integrative course based entirely on case studies and teamwork. The cases will be taken from several areas involving business policy and strategic decisions of various forms of organizations in a global economy. Students will be required to collect cases by readings and also attempt to write cases based on current developments. These cases will be assigned for in-depth study and analysis, followed by group presentations and reporting. The reports and the conclusions will then be evaluated and the students will be required to defend their analysis.

Specialization Stream Courses

These are in-depth elective courses which students take in order to specialize in a functional area of business or in general management. They are typically taken in the third and fourth semesters.

FINANCIAL MANAGEMENT

MBA 721: CORPORATE FINANCIAL THEORY (3 Credits)

Pre-requisites: MBA 621.

This course builds on the introductory finance material covered in MBA 621. Modern corporate financial theory and its applications are the main focus. Topics include capital structure, cost of capital, dividend policy, the capital asset pricing model (CAPM), asset pricing, market efficiency, introduction to derivatives and portfolio theory, and value at risk.

MBA 722: FINANCIAL MARKETS AND INSTITUTIONS (3 Credits)

Pre-requisites: MBA 621

An understanding of financial markets and their role in financial intermediation is essential for any manager. This course will introduce students to the functioning of Indian money and capital markets - the equities market, the fixed income securities market; term structure of interest rates, duration and convexity; financial institutions – banks, insurance, investment companies, and asset liability management. Part of the course will be devoted to hands-on exposure to stock market operations.

MBA 723: INTERNATIONAL FINANCE (3 Credits)

Pre-requisites: MBA 621

Globalisation over the last three decades has exposed the corporate sector to increasing risk due to changes in the exchange control regime and the opening of the national financial markets to foreign investors. Companies must learn to manage such exposure to risk and to deal in foreign exchange. This course will introduce students to the global financial environment, the nature and operation of foreign exchange markets, exchange rate regimes, hedging of currency exposure, and international trade.

MBA821: PORTFOLIO THEORY AND INVESTMENT MANAGEMENT (3 Credits)

Pre-requisites: MBA 721 and MBA 722.

This course primarily focuses on modern finance and investment and the principles underlying portfolio management. Topics include Markowitz diversification, capital market theory, the CAPM and the APT, passive and active management and evaluation of investment performance.

MBA 822: FINANCIAL DERIVATIVES (3 Credits)

Pre-requisites: MBA 721, MBA 722. Co-requisite: MBA 821.

This course will introduce the concept of derivatives, the current Indian derivatives market and discuss the principles for valuation of futures and options, various pricing models, risk management strategies using derivatives, and interest rate futures and swaps.

MBA 826: SOFTWARE APPLICATIONS IN FINANCE (3 Credits)

Pre-requisites: MBA 721 and MBA 722. Co-requisite: MBA 821.

This course, required for the Finance

specialization, will explain the workings of the theories and models that students learn in pre-requisite courses with the help of computer models using Excel and selected financial applications software.

MBA 827: CASE PROBLEMS IN FINANCE (3 Credits)

Pre-requisites: MBA 721, MBA 722.

Co-requisite: MBA 723.

The purpose of the course is to help students develop decision-making skills and learn to apply conceptual knowledge to real life problems. The pedagogy is entirely case based and we will have cases on conceptual knowledge acquired through other Finance courses. It involves discussion and analysis of cases on cost of capital and capital structure theories, capital budgeting, dividend policy, mergers and acquisition, valuation, financial statement analysis, risk management and international finance.

MBA 828: DIRECTED READINGS IN FINANCE (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program and at least two Finance area electives plus the permission of the Instructor.

This course will assign selected readings on contemporary developments in Finance theory and practices from a variety of sources including journal articles. Students will be required to demonstrate their complete understanding of the assigned readings in weekly meetings and provide written summaries and reports on their readings and associated additional research. Eligibility standards for enrolment in the course will be set at a higher level and enrolment may be by invitation from faculty only.

MBA 829: ADVANCED TOPICS IN FINANCE (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program and at least two Finance area electives plus permission of the Instructor.

This course will present advanced topics in Finance involving contemporary problems of interest, such as advances in valuation, computational finance or risk management. Practitioners may be brought in to discuss these topics in their respective domains. It will offer senior students an opportunity for intensive and in-depth study of selected topics or current issues in Finance. The topics are likely to vary from semester to

semester depending on class composition, class size and student and faculty interests.

GENERAL MANAGEMENT

MBA 731: BUSINESS POLICY (3 Credits)

Pre-requisites: Successful completion of the first two semesters of the MBA Program.

Business Policy and Strategy is a social discipline founded on the economics of creating wealth by organizing and running privately owned entrepreneurial entities. Topics for this course include corporate planning model, how VISION and MISSION are the foundations for running a firm in a competitive environment, optimizing conflicting business interests of the stakeholders, role and importance of ethical behavior on the part of managers in an organization, maintaining competitive advantage, increasing role of technology and innovation in creating values for sustaining competitive advantage, the need to periodically evaluate the attractiveness of industries for managing the risk and return balance and current models in business strategy.

MBA 732: STRATEGIC MANAGEMENT (3 credits)

Pre-requisites: MBA 531, MBA 541 and successful completion of all the first two semester courses in the MBA Program.

This course builds on the principles and practices of management learnt in earlier courses. It concentrates on the modern analytical approaches and on successful strategic practices. The course is intended to provide the students with a pragmatic approach that will guide the formulation and implementation of corporate, business, and functional strategies. Topics include strategic evaluation and control, Delta model strategies, frameworks for competitive positioning, opportunity Costs and other related SBU processes, McKinsey's organizational structure concepts, strategy formulation and implementation, and balanced scorecard concepts.

MBA 734: SMALL BUSINESS MANAGEMENT AND ENTREPRENEURSHIP (3 Credits)

Pre-requisites: Successful completion of all courses in the first two semesters of the MBA Program.

This course focuses on the nature and management of small business and on entrepreneurship both as a discipline and a

career option. Topics include the distinguishing characteristics of small businesses, their problems and opportunities, the traits of a successful small business operator and manager. Additional topics focus on entrepreneurial traits, women entrepreneurs, social entrepreneurship and entrepreneurial development. Students will be exposed to governments and SME, review of policies, legal framework, forms of enterprises, converting business opportunities into reality, essentials of a business plan, financing and managing a new venture.

MBA838: DIRECTED READINGS IN MANAGEMENT (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program plus permission of the Instructor.

This course will assign selected readings on contemporary developments in managerial theory and practices from a variety of sources including journal articles. Students will be required to demonstrate their complete understanding of the assigned readings in weekly meetings and provide written summaries and reports on their readings and associated additional research. Eligibility standards for enrolment in the course will be set at a higher level and enrolment may be by invitation from faculty only.

MBA 839: ADVANCED TOPICS IN MANAGEMENT (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program and at least two Management area electives plus permission of the Instructor.

This course will present advanced topics in Management involving contemporary problems of interest in management theory and practice as well as in strategic management. Practitioners may be brought in to discuss these topics in their respective domains. It will offer senior students an opportunity for intensive and in-depth study of selected topics or current issues in general and strategic management. The topics are likely to vary from semester to semester depending on class composition, class size and student and faculty interests.

HUMAN RESOURCE MANAGEMENT

MBA 741: TRAINING, DEVELOPMENT AND COMPETENCE MANAGEMENT (3 Credits)

Pre-requisites: MBA 641

Introduction to the terms and concepts related to development and training and the

design and delivery of an effective training session. The topics include need assessment, transfer of training, traditional training methods, training evaluation, strategic training, and employee development.

MBA742: INDUSTRIAL RELATIONS, COLLECTIVE BARGAINING AND NEGOTIATION (3 Credits)

Pre-requisites: MBA 641

This course will give students an overview of the various labor laws and grievance handling machineries. The topics include Factories Act, Industrial Disputes Act, Payment of Bonus Act, Payment of Gratuity Act, Employee provident funds Act, Workmen's Compensation Act, Collective Bargaining and Negotiation.

MBA841: STRATEGIC AND INTERNATIONAL HUMAN RESOURCE MANAGEMENT (3 Credits)

Pre-requisites: MBA 641

This course deals with the interaction between strategy and human resources and managing human resources in the international environment. The topics include strategic aspects of human resource management, strategic international human resource management, design of multinational enterprise, impact of culture on IHRM, global workforce planning and staffing, selection and training of international assignees, global compensation and benefits and international performance management.

MBA 842: PERFORMANCE AND COMPENSATION MANAGEMENT (3 Credits)

Pre-requisites: MBA 641

This course deals with the topics of performance planning, performance evaluation, and performance coaching, current trends in Performance Management Systems or PMS, nature of compensation, pay structures, variable pay, elements of executive compensation and performance incentives.

MBA 846: SOFTWARE APPLICATIONS IN HRM (3 Credits)

Pre-requisites: MBA 641 and at least two HRM electives.

This course, required for the HRM specialization, will explain the workings of the theories and models that students learn in pre-requisite courses with the help of computer models and ERP and HRM applications software.

MBA 847: CASE PROBLEMS IN HRM (3 Credits)

Pre-requisites: MBA 741, MBA 742.

This course, required for the HRM specialization, would be based entirely on case problems in HRM. Students will be assigned one or more cases, which each one will be required to study in depth. Then they will discuss these cases in class. Students may be divided into groups and each group will present its assigned case both verbally in class and in a full-length written report. Further, they will be required to defend their analysis and conclusion in class.

MBA 848: DIRECTED READINGS IN HRM (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program, and successful completion of at least two HRM area electives plus permission of the Instructor.

This course will assign selected readings on contemporary topics in the HRM area from a variety of sources including journal articles. Students will be required to demonstrate their complete understanding of the assigned readings in weekly meetings and provide written summaries and reports on their readings and associated additional research. Eligibility standards for enrolment in the course will be set at a higher level and enrolment may be by invitation from faculty only.

MBA 849: ADVANCED TOPICS IN HUMAN RESOURCE MANAGEMENT (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program, and successful completion of at least two HRM area electives plus permission of the Instructor.

This course will present advanced topics in Human Resource Management involving contemporary problems of interest in strategic HRM as well as other areas in the discipline. Practitioners may be brought in to discuss these topics in their respective domains. It will offer senior students an opportunity for intensive and in-depth study of selected topics or current issues in general and strategic HRM. The topics are likely to vary from semester to semester depending on class composition, class size and student and faculty interests.

MARKETING MANAGEMENT**MBA751: CONSUMER BEHAVIOUR (3 credits)**

Pre-requisites: MBA 651.

The focus of this course is the psychology of consumers as individuals and groups – how they reason and choose among alternative products or services, the influence of culture, environment, and information processing abilities on their buying behaviour. The course will also address how knowledge of these factors can affect a firm's marketing strategy, public policy formulation for consumer education and social marketing.

MBA752: RETAIL MARKETING AND MANAGEMENT (3 Credits)

Pre-requisites: MBA 651.

This course is specifically designed towards retailing as a subset of marketing. It is organized around a model of strategic decision-making in the retail industry. It deals with back-end operations and store management which includes supply chain, merchandising, customer service, the retail consumer behaviour, store location, and shopping experience.

MBA 753: SERVICES MARKETING (3 Credits)

Pre-requisites: MBA 504, MBA 651.

The primary objective of this course is to help students understand and address the special problems and opportunities of services marketing thereby helping students focus on the attraction, retention and building of strong customer relationships through quality service. Topics include service development and design, setting service standards, the roles of the customer, the employees and the intermediaries in service delivery, demand management and pricing in services, the 'gaps' model of service quality, and selected cases from different service industries.

MBA 754: DIRECT MARKETING (3 Credits)

Pre-requisites: MBA 504, MBA 651.

The focus of this course is on carefully coordinated advertising campaigns and Direct Marketing programs, which have a synergy that can spell success. Topics include evolution of DM, growth drivers for DM, introduction to e-Commerce, direct mailing, infomercials, database marketing and mailing lists, list enhancement, marketing databases, marketing database applications, privacy concerns, loyalty programs, coordination challenges and case studies.

MBA755: ADVERTISING AND PROMOTION**(3 Credits)**

Pre-requisites: MBA 504, MBA 651.

This course focuses on a sophisticated understanding of advertising and promotion. Topics include branding and brands, integrated efforts of Above The Line and Below The Line activities, advertising as a process, the structure of the advertising industry, social and ethical aspects, advertising and consumer behavior, segmentation and positioning the value proposition, advertising research and the advertising plan, the international perspective, creativity and advertising, message development and copywriting, art direction and production, media planning, media types and internet advertising, event sponsorship, public relations and corporate advertising and contemporary cases.

MBA 851: INTERNATIONAL MARKETING (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program and at least two marketing area electives plus permission of the Instructor.

This advanced course addresses the unique challenges to a marketer in today's global market place. Topics include culture, political and economic situations, currency fluctuations, economic integration and unique characteristics of international customers, scope, concepts, drivers and obstacles in the international marketing environment, an overview of the world economic environment, risk and risk management, legal issues, international trade theories, trade barriers, facilitators, trade blocs and economic integration, exchange rates and pricing strategies, market entry modes, product services and branding decisions, retailing, distribution and logistics in international marketing and case studies of Fortune 500 firms.

MBA 856: SOFTWARE APPLICATIONS IN MARKETING (3 Credits)

Pre-requisites: MBA 751, MBA 752.

Co-requisite: MBA 730.

This course, required for the Marketing specialization, will demonstrate the application of the concepts and models developed in the pre-requisite courses in the specific context of Marketing Management. A variety of software will be used, including MS – Excel, and available CRM, ERP and statistical applications software.

MBA858: DIRECTED READINGS IN MARKETING (3 Credits)

Pre-requisites: Successful completion of

the first three semesters of the MBA program, and at least two Marketing area electives plus permission of the Instructor.

This course will assign selected readings on contemporary developments in Marketing, including e-Marketing, from a variety of sources including journal articles. Students will be required to demonstrate their complete understanding of the assigned readings in weekly meetings and provide written summaries and reports on their readings and associated additional research. Eligibility standards for enrolment in the course will be set at a higher level and enrolment may be by invitation from faculty only.

MBA 859: ADVANCED TOPICS IN MARKETING (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program and at least two Marketing area electives plus permission of the Instructor.

This course will present advanced topics in Marketing involving contemporary problems of interest in strategic marketing as well as other areas in the discipline. Practitioners may be brought in to discuss these topics in their respective domains. It will offer senior students an opportunity for intensive and in-depth study of selected topics or current issues in strategic marketing, marketing research methodology and practice, the evolving global market place and other areas of marketing. The topics are likely to vary from semester to semester depending on class composition, class size and student and faculty interests.

PRODUCTION AND OPERATIONS MANAGEMENT**MBA 762: PRODUCTION PLANNING AND CONTROL (3 Credits)**

Pre-requisites: MBA 661.

This course will build on the introductory material presented in MBA 661. Topics include: review of elementary inventory models; advanced inventory control – kanban and just in time; material requirements planning – MRP I and MRP II; supply chain management – designing and operating supply chains; scheduling; introduction to advanced manufacturing technology.

MBA 863: PROJECT MANAGEMENT (3 Credits)

Pre-requisites: MBA 661, MBA 662.

This course will introduce project

management concepts and progressively move through all aspects of project management from project formation through project completion. The course will have a judicious mix of concepts, theory, cases and project management software application. The topics include project appraisal, project planning, evaluation, critical path methods and analysis, implementation, monitoring and control, and project completion.

MBA 866: SOFTWARE APPLICATIONS IN POM (3 Credits)

Pre-requisites: MBA 661, MBA 662.

This course, required for the POM specialization, will demonstrate the application of the concepts and models developed in the pre-requisite courses in the specific context of production and operations management. A variety of software will be used, including MS – Excel, and available ERP and statistical applications software.

MBA 867: CASE PROBLEMS IN POM (3 Credits)

Pre-requisites: MBA 661, MBA 662.

Co-requisite: MBA 761.

This course, required for the POM specialization, would be based entirely on case problems in POM. Students will be assigned one or more cases, which each one will be required to study in depth. Then they will discuss these cases in class. Students may be divided into groups and expected to present their assigned case both verbally in class and in a full-length written report. Further, they will be required to defend their analysis and conclusion in class.

MBA 868: DIRECTED READINGS IN POM (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program, and at least two POM area electives plus permission of the Instructor.

This course will assign selected readings on contemporary developments in POM from a variety of sources including journal articles. Students will be required to demonstrate their complete understanding of the assigned readings in weekly meetings and provide written summaries and reports on their readings and associated additional research. Eligibility standards for enrolment in the course will be set at a higher level and enrolment may be by invitation from faculty only.

MBA 869: ADVANCED TOPICS IN POM - (3 Credits)

Pre-requisites: Successful completion of the first three semesters of the MBA program, and at least two POM area electives plus permission of the Instructor.

This course will present advanced quantitative techniques, including network models and simulation, for use in solving problems in the POM area. Practitioners may be brought in to discuss these topics in their respective domains. It will offer senior students an opportunity for intensive and in-depth study of selected topics or current issues in POM. The topics are likely to vary from semester to semester depending on class composition, class size and student and faculty interests.

Internship/ Mini Project**MBA901: INTERNSHIP/MINI-PROJECT (3 Credits)**

Students can take up an industry-sponsored project or a research based in-house project leading to Master's level competency.

For industry-sponsored projects, the Career Management Center facilitates interaction between students and the industry. Students are encouraged to work on projects that will enhance their understanding in certain technology domains in real-life scenario.

The research project includes researching on the given/chosen seminar topic that will generally be state-of-the-art in the field and then delivering the seminar to peers and faculty along with its documentation in the prescribed IEEE format. Following the seminar the student has to undertake a research project under the guidance of tenure track/visiting faculty/and industry experts. The research project has to be submitted in the form of a dissertation that will be examined by experts nominated by the institute. The research project is the culmination of the student's learning in the institute and is expected to be of high standards as demanded by the industry from time to time.

Total Course Credits (Minimum): 78

Note: Foreign language is an independent certificate program, compulsory for all students.

MBA Program in Management

Course Structure

	Code	Course Name	Credits*
FOUNDATION	MBA 501	Financial Statement Analysis	3
	MBA 502	Microeconomics	3
	MBA 503	Macroeconomics	3
	MBA 504	Managerial Communication	3
	MBA 511	Management Information Systems	3
	MBA 531	Principles of Management and the Business Enterprise	3
	MBA 541	Organizational Behaviour	3
	MBA 561	Business Statistics	3
CORE	MBA 611	Enterprise Resource Planning I	3
	MBA 621	Corporate Financial Management	3
	MBA 641	Human Resource Management	3
	MBA 651	Marketing Management	3
	MBA 661	Production and Operations Management	3
ADVANCED	MBA 711	Enterprise Resource Planning – II	3
	MBA 811	Enterprise Resource Planning – Business Case	3
	MBA 730	Research Methodology	3
	MBA 733	Business, Government and Society	3
	MBA 837	Case Problems in Business Policy and Strategy	3
	MBA 761	Quantitative Methods in Business	3
	MBA 8X6	Software Applications in the student's area of Specialization	3
ELECTIVES	Financial Management		
	MBA 721	Corporate Financial Theory	3
	MBA 722	Financial Markets and Institutions	3
	MBA 723	International Finance	3
	MBA 821	Portfolio Theory and Investment Management	3
	MBA 822	Financial Derivatives	3
	MBA 826	Software Applications in Finance	3
	MBA 827	Case Problems in Finance	3
	MBA 828	Directed Readings in Finance	3
	MBA 829	Advanced Topics in Finance	3
General Management			
MBA 731	Business Policy	3	
MBA 732	Strategic Management	3	
MBA 734	Small Business Management and Entrepreneurship	3	
MBA 838	Directed Readings in Management	3	
MBA 839	Advanced Topics in Management	3	
Human Resource Management			
MBA 741	Training and Development with Competence Management	3	
MBA 742	Industrial Relations, Collective Bargaining and Negotiation	3	
MBA 841	Strategic and International Human Resource Management	3	
	MBA 842	Performance and Compensation Management	3
	MBA 846	Software applications in HRM	3
	MBA 847	Case Problems in HRM	3
	MBA 848	Directed Readings in HRM	3
	MBA 849	Advanced Topics in Human Resource Management	3
Marketing Management			
	MBA 751	Consumer Behaviour	3
	MBA 752	Retail Marketing and Management	3
	MBA 753	Services Marketing	3
	MBA 754	Direct Marketing	3
	MBA 755	Advertising and Promotion	3
	MBA 851	International Marketing	3
	MBA 856	Software Applications in Marketing	3
	MBA 858	Directed Readings in Marketing	3
	MBA 859	Advanced Topics in Marketing	3
Production and Operations Management			
	MBA 762	Production Planning and Control	3
	MBA 866	Software Applications in POM	3
	MBA 867	Case Problems in POM	3
	MBA 868	Directed Readings in POM	3
	MBA 869	Advanced Topics in POM	3
	Project MBA 901:	Internship / Mini Project	3

* 1 Credit Hr = 16 Class Hrs / 32 Lab Hrs in a semester

MBA Program in Information Technology

"To turn really interesting ideas and fledgling technologies into a company that can continue to innovate for years, it requires a lot of disciplines."

- Steve Jobs

Information and Communication Technology has forayed into every facet of life including the way in which businesses are conducted throughout the world. Consequently, businesses have transformed themselves from the conventional models into technology-enabled models. Business administration has therefore become technology enabled.

Conventional business management education typically focuses on the basic areas of Production, Marketing, HR and Finance practices. With the advent of IT and the use of IT in business, the need for running enterprises from an IT perspective has emerged. Business managers of today are expected to run their businesses based on skills derived from IT and ITeS coupled with conventional norms of business enterprise. The industry in India today boasts of a turnover of US \$ 20 billion, and will continue to grow consistently. Today, one in four Fortune 1000 companies outsource their software requirements to India. IT enabled Services (ITeS) has emerged as the key IT growth driver with 10.6% of the total IT software and service industry revenues. Services in the country have also increased to about 56% of the total IT services facilitated by improved infrastructure and ambitious entrepreneurship.

Program

This autonomous four, semester, 24-month, 78 Credits, full-time MBA Program in Information Technology is designed to equip the students to accept the responsibilities in:

- ▲Convergence of business and IT
- ▲Impact of the digital economy on organization
- ▲Role of IT in organizational strategy, growth and competitive advantage
- ▲IT projects management
- ▲Manage IT-related changes through understanding of organizational and human impacts
- ▲International Business and Marketing for Software Solutions and Products

Program Structure

- ▲Successful completion requires 78 Credits.
- ▲The program is distributed over **four** semesters.
- ▲The curriculum is distributed over four levels to aim at transcending the students' level of understanding for corporate readiness. The levels are Foundation, Core, Advanced, and Project.

Program Pedagogy

All courses are designed to cover theoretical

foundations, practical applications and the real life problem solving approach. To achieve this courses will be delivered using collaborative learning process through class room lectures, laboratory sessions, assignments, student seminars, lectures by industry experts, case studies, relevant industry visits and research / industry projects.

Distinctive Features

- ▲Case study based delivery, through theoretical understanding and hands-on sessions for better assimilation of knowledge
- ▲Thorough understanding of IT requirements in business environments
- ▲Expert lectures, seminars, and case studies by leading experts from industries
- ▲Exposure to Cyber Law and Security Audits
- ▲Hands-on experience in project management tools
- ▲In depth knowledge in enterprise resource planning and e-business
- ▲Emphasis on business communication and presentation skills
- ▲Option to work on projects that require working with faculty members and students from other streams such as advanced networking and telecom, Embedded Systems and VLSI.

Eligibility

Graduates with any recognized Bachelors Degree of minimum three years duration with focused education in IT, with at least 50% marks at the graduation level. Programming background in C /C++ is desired.

Program Commencement

The program commences in July / October

Evaluation and Certification

- ▲Continuous evaluation and performance improvement program
- ▲Course-wise Credits
- ▲Balanced assessment based on internals, laboratory and final theory examinations and project
- ▲Detailed transcripts along with certificate

Selection Process

The selection of an applicant for the course is based on the following:

- ▲Application forms shall be scrutinized for academic profile in line with the eligibility criteria
- ▲Scores received at the Graduation level
- ▲Scores received at the "Accepted Qualifying Examinations" like GRE / GMAT / XAT / CAT / GATE & Performance