SCHEME OF EXAMINATION

&

DETAILED SYALLBUS

for

Masters in Business Administration

in

ENTERPRISE SYSTEMS

WEEKEND PROGRAMME

Offered by

INDIRA GANDHI INSTITUTE OF TECHNOLOGY
Guru Gobind Singh Indraprastha University
Kashmere Gate,
Delhi –110 006

Effective from academic session 2007-08, uploaded on 4th April, 2008

Admission Criteria & Eligibility

Admission Criteria:
Admission will be based on the merit list of the candidates in the qualifying examination in following branch of engineering**.**

Entry Level: 60% or equivalent in the qualifying examination**.**

Engineering Discipline:
B.Tech./B.E. in Mechanical Engineering / Mechanical & Automation Engineering / Production Engineering / Industrial & Production Engineering / Computer Science Engineering / Informaion Technology / Electronics and Communication Engineering or Equivalent.

Experience:
In addition to above qualification(s), candidates should also have at least one year of Professional / Teaching experience after completing the qualifying examination as on 30th June.
Note: For higher deserving candidates this can be waived off.

Merit List:
Merit List will be prepared on the following basis:

- Percentage of qualifying degree
- **One** Mark per additional year of experience up to maximum of **five**.

MBA
[Enterprise Systems]
Weekend Programme

First Trimester

Code No.	Paper	L	T/P	Credits
Theory				
MEW 501	Enterprise Systems Management	4	-	4
MEW 503	Evolving Competitiveness in Industry	4	-	4
MEW 505	Operations Management	4	-	4
Practical				
MEW 551	Operations Management Lab	-	2	1
MEW 553	Innovation Seminar – 1 (Term Paper)*	3	-	3
	Total	**15**		**16**

* **Non University Exam System**

M.B.A
[Enterprise Systems]
Weekend Programme

Second Trimester

Code No.	Paper	L	T/P	Credits
Theory				
MEW 502	Knowledge Management	4	-	4
MEW 504	Industrial R&D Management	4	-	4
MEW 506	Industrial Engineering and Systems	4	-	4
MEW 508	E-Business	4	-	4
	Total	**16**		**16**

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Weekend Programme

Third Trimester

Code No.	Paper	L	T/P	Credits
Theory				
MEW 601	Management of Information Systems	4	-	4
MEW 603	Enterprise Resource Planning	4	-	4
MEW 605	Supply Chain Management	4	-	4
MEW 607	Enterprise and Service Systems	4	-	4
	Total	**16**		**16**

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Fourth Trimester

Code No.	Paper	L	T/P	Credits
Theory				
MEW 602	Computer Simulation in Enterprise Systems	4	-	4
MEW 604	Systems Engineering	4	-	4
MEW 606	Techno Managerial Skills Development*	2	-	2
MEW 608	Elective -I	3	-	3
MEW 610	Elective -II	3	-	3
Practical				
MEW 652	Minor Project Work*	-	-	2
	Total	**16**		**18**

* **Non University Exam System**

List of Electives: Elective – I

- Re-engineering of Systems : e-governance Case
- Strategic Management

List of Electives: Elective – II

- Intelligence in Enterprise Systems
- Technology Management

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Fifth Trimester

Code No.	Paper	L	T/P	Credits
Theory				
MEW 701	Extended Enterprise	4	-	4
MEW 703	Enterprise Architecture	4	-	4
MEW 705	Human Resource Management In Enterprise Systems	4	-	4
MEW 703	Elective - III	3	-	3
MEW 705	Elective - IV	3	-	3
	Total	**18**		**18**

* **Non University Exam System**

List of Electives : Elective III

- E-Learning to Enterprise Management
- Information Technology and Enterprise Systems

List of Electives : Elective IV

- Innovation and Enterprise Systems
- Strategic Computing and Enterprise Systems

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Weekend Programme

Sixth Semester

Code No.	Paper	L	T/P	Credits
MEW 702	Enterprise Management And Entrepreneurship	4	-	4
MEW 704	Elective - V	3	-	3
MEW 706	Major Project	-	-	12
	Total	**7**		**21**

List Of Electives: Elective V

- Enterprise Management and Artificial Intelligence

Note:
1. The total number of credits of the program M.B.A. [Enterprise Systems] = 105
2. Each student shall be required to appear for examinations in all courses. However, for the award of the degree a student shall be required to earn the minimum of 100 credits.
3.All core Subjects have 4 credits, all elective subjects have 3 credits .There will be12 credits for Major Project Work and 2 credits for Minor Project and Non university papers

Note: Elective course(s) will be offered only if it is opted by 33% of actual strength of the class.

Brief Outline of the Course Curriculum of Various Subjects in MBA (Enterprise systems)

Trimester I

Enterprise Systems Management:
Introduction to management theory, the system approach to enterprise management, Systems methodology, System Engineering, focus on quality systems, Nature, need and scope of enterprise systems, Concepts of System, Elements of Enterprise System Management, Role of IT in Enterprise system management.

Evolving Competitiveness in Industry:
Evolving competition challenges in business, Cost based competition, quality based competition, flexibility based competition and other factors, Role of IT in competitiveness, IPR ,WTO and its implications, Knowledge and Innovation in Competitiveness, Total Quality Management & Its Impact on competitiveness

Operations Management:
Introduction to Operations Management, planning and design of production and operations systems, Introduction to mathematical programming models, Computational Techniques, Sensitivity analysis, Dynamic Programming, Goal Programming, Stochastic models used in operations management, Birth and death processes with applications in queuing models, inventory models

Trimester II

Knowledge Management:
Need for Knowledge and its effectiveness, role of IT, KM and challenges of CIMS,KM technical concepts, The knowledge edge, Knowledge Engineering, Knowledge Framework, Design and deployment of KM in industrial enterprises, Km and competitive link, effective systems, Knowledge audit, KM technical concepts

Industrial R&D Management:
Need of R&D, Management of R&D, Industrial view of R&D, Problem conceptualization and definition, Hypothesis formulation, selection of Research Methods, Flexible Systems methodology for preparing research design, Scaling, sampling methods, Questionnaire design, Field experiments, Quasi experiments, Quantitative research methods

Industrial Engineering and Systems:
Definition and evolution, Understandind Industrial system focus, Performance measures of an industrial systems, Classical Industrial Engineering –work study, method study, time study, Motivation recent and emerging applications of IE, Increasing Integration in Industrial Enterprises ,Decision Support System(DSS), Engineering managers, System and process(ERP)

E-Business:

Changes in industrial Enterprise Challenges, Evolving Business Systems and their environment, era of It based competitiveness , introduction to e-business, New value propositions, multi attributed Competitiveness, Flexible and Agile Enterprises, e-business and process re-engineering(BPR), e-business architect, Customer relation management(CRM), e-procurement, Implementation Challenges, Industrial Cases, Future Trends

Trimester III

Management of Information Systems:

Role of information in Manager Decision making, Information Needs for various levels of managerial Decision, Computer based information systems, Transaction Processing systems, Information Systems planning, Design and implementation, structured systems analysis and design, Evaluation of an information systems, Introduction to Decision support Systems ,User involvement, MIS life cycle, Case Studies

Enterprise Resource Planning:

ERP, Features of ERP, purpose of modeling an enterprise,Information mapping, Scope of enterprise system, generic model of ERP, approach to ERP, AHP approach, Proof of Concept approach, Methodology for ERP implementation, USA principle for ERP implementation, Illustrative examples

Supply Chain Management:

Historical Evolution of SCM, Supply Chain components, Forecasting, Inventory Strategy, Information Strategy, Transportation Strategy, Warehouse management, Information strategy for SCM, role of Information Technology in SCM, Performance Measurement, Organization Design and Structure for effective supply chain

Enterprise and Service Systems

Introduction, Various Service Systems, Business processing systems, Enterprise support systems, Models of service systems. Managing service systems in enterprise, Performance analysis of service systems, Queuing Theory and the use of Queuing Model in Service System. Software and hardware tools. Use of Information Technology in service industry,

Trimester IV

Computer simulation in Enterprise Systems:

Classification of simulation models, Computer Simulation packages for management, Development of models for manufacturing systems and service systems, model development for supply chain, development of DSS based on simulation, the simulation process, enterprise system investigation, model formulation, validation and translation, tactical planning and management aspects, time flow mechanism of Enter*p*rise Systems

***Systems Engineering*:**
Systems engineering is an interdisciplinary approach and means to enable the realization of successful systems. It focuses on defining customer needs and required functionality early in the development cycle, documenting requirements, then proceeding with design synthesis and reliability improvement while considering the complete problem including operations, performance, test, manufacturing, cost, and schedule. This course emphasizes the links of systems engineering to fundamentals of decision theory, statistics, and optimization. The course also introduces the most current, commercially successful techniques for systems engineering.

***Techno Managerial Skills Development*:**
This will be an in house course and the contents required will vary every year depending on the requirements of the industry. Various techniques can be used to develop Techno Managerial skills among the students

Electives

Re-engineering of Systems:
Nature, significance and rationale of Reengineering, reengineering scenario in major countries, Methodology and steps, IT enabled reengineering, paradigm of mass customization, reinventing the enterprise, reengineering management

Strategic Management
Emerging strategy management process, Criticality of strategy for growth, resource leverage, strategy situation analysis, PEST analysis, Strategy management in different contexts, patterns of strategy development, vertical integration strategies, Flexibility in strategy, strategic management process, strategy shifts and resource commitments

Intelligence in Enterprise Systems:
Introduction to A.I., Role of A.I. in enterprise system, Problem solving, techniques in enterprise systems, control strategies, learning through neural nets, handling uncertainty, rule based systems, Expert System for Management

Technology Management
Understanding technology, definition, key concepts, role, issues of concern in management of new technology, Technology management integration, Technology forecasting and assessment, flexibility in technology management, Technology support systems, Technology implementation

Trimester V

Extended enterprise
Extended enterprise control, Design of extended Enterprise, Supply Chain management & Extended Enterprise, E-learning, E-Governance & extended enterprise, Vender Vendee Relation. Performance analysis

Enterprise Architect
Overview of Enterprise Architect, Main features, Diagrams, UML 2.0 diagrams, Use Case diagrams, Activity diagrams, Sequence diagrams, Communication diagrams, Class diagrams, Object diagrams, State Chart diagrams, Component diagrams, and Deployment diagrams, integration of Enterprise Architect model with version control system Code Engineering: code generation and reverse engineering features

Human Resource Management in Enterprise Systems:
Understanding Human Resource management in enterprise systems, Cybernetics and socio-technical systems, issues of efficiency and excellence, man-machine relationship, concerns of enterprise systems, Skills formation and redeployment, developing teams and leadership, human resource planning, Indian industrial law, managing industrial relations

Electives

E-Learning to Enterprise Management
Introduction to e-learning, e-learning models, Software & Hardware requirement for e-learning, Various tools of e-learning, e-business, e-technology, Enterprise management through e-learning, use of IT in business, e-business concepts and tools.

Information Technology and Enterprise Systems:Evolving Enterprise environment, Role of IT, Enterprise Systems concepts, Applications of computer in Enterprise Systems, Automation Strategies, Programmable automation, intelligence in Systems, expert System Applications, Computer simulation, Modeling, Towards Agile Enterprise Systems

Innovation and Enterprise Systems
Technological innovation systems and processes in enterprise systems, factors affecting successful innovation, Critical functions in innovation process of enterprise systems, information management for innovation in system, Innovation and BPR/appraisal system

Strategic Computing and Enterprise Systems:
Structure of decisions, statistical decision theory, decision trees, Fuzzy decision making, geometric programming and Direct search strategic techniques, SWOT analysis for technology, Strategy and functional strategy in enterprise systems,

Trimester VI

Enterprise Management and Entrepreneurship:
Self Employment need and mode, structural base of Indian economic life, indices of technical entrepreneurship, problem solving, decision making, conflict and change in a new industrial enterprise, Enterprise systems considerations in an entrepreneurial venture, management reporting and information systems of anew business enterprise

Enterprise Systems and Artificial Intelligence:
Problem solving, Search techniques, control strategies, knowledge representation through predicate logic, role of AI in enterprise management, techniques of AI for Enterprise systems management, learning through neural nets expert systems