

MSc Enterprise Systems Development and Management (Full Time/ Part Time) – E560

1. Introduction

Available in both full and part-time mode, the MSc Enterprise Systems Development and Management programme will provide graduates from IT and related fields with the necessary skills to manage enterprise-wide systems. This programme is a response to the increasing need of business centres for leaders who can manage people and processes, who communicate well, and who are knowledgeable about the issues and best practices in integrating and managing enterprise data and processes. The course has been designed to permit a high degree of flexibility in that students may take varying combinations of modules.

2. Aims and Objectives

The programme aims at developing skills in managing enterprise-wide information systems that coordinate all the resources, information, and activities needed to complete business processes such as order fulfilment or billing. The successful graduate will become a competent manager who can communicate well, train and lead others in selecting, installing, integrating, protecting, and maintaining integrated systems for business functions such as business intelligence, manufacturing, supply chain management, financials, projects, human resources and customer relationship management. Modules will include class presentations by students.

3. General Entry Requirements

Successful completion of an undergraduate degree with at least a Second Class or 50%, whichever is applicable, or a GPA not less than 2.5 out of 4 or equivalent, from a recognised Higher Education Institution, or alternative qualifications acceptable to the University of Mauritius.

4. Programme Requirements

Any undergraduate degree in Computer Science or other related areas, OR business/management degree with IT-based modules acceptable to the department. Familiarity with accounting concepts is advantageous.

5. Programme Duration

The normal duration of the programme will be as detailed below.

	Full time (yrs)	Part Time (yrs)
Minimum	1	2
Maximum	2	4

However students wishing to exit earlier, with a Postgraduate Diploma, can do so subject to their meeting the requirements specified in item 6.

The programme will be run on a semester system, where an academic year consists of two semesters. A semester is of 15 weeks duration (excluding Exam Period).

6. Minimum Credits Required for Award of:

Master's Degree	: 36
Postgraduate Diploma	: 24

Breakdown as follows:

	Minimum Core Taught Modules	Dissertation	Electives Optional Modules
Master's Award	18 credits	12 credits	6 credits
Postgraduate Diploma	18 credits		6 credits

7. Assessment

All modules are of 45 hours duration and carry equal weightage [i.e of 3 credits].

All modules will carry 100 marks and will be assessed as follows (unless otherwise specified).

- A written examination of 3 hours and
- Continuous assessment carrying a range of 30% to 40% of total marks. Continuous assessment may be based on laboratory works, and/or assignments and tests but should include at least 2 assignments/tests per module.
- A minimum of at least 30% should be attained in each of continuous assessment and Written Examination, with an overall total of 40% for a candidate to pass a module.

Students are required to register for modules which they intend to follow in a given semester on date(s) specified by the Faculty.

Submission Deadlines for Project – as per university regulation:

	Full time	Part Time
Start	January – Level 1	January – Level 2
Submission	Last working day of August – Post Level 1	Last working day of August – Post Level 2

8. List of Modules

CORE MODULES

CSE 6209 - Software Project Management
 CSE 6027 - Enterprise Applications Development
 CSE 6080 - ERP & Change Management
 CSE 6081 - Enterprise Data Management
 ENGG 6101 - Principles of Project Management
 MGT 5212 - Human Resources and Quality Management
 CSE 6000 - Project

ELECTIVE MODULES

Group A

CSE 6082 - Computer and Network Security (3L)
 CSE 6083 - E-Business Technology (2L + 2P)
 CSE 6084 - Enterprise Networking (3L)
 CSE 6085 - Enterprise Architecture and Integration (3L)

Group B

ACT 5112 - Project Economics and Finance (3L)
 ENGG 6305 - Procurement Management (3L)
 LAW 5401 - Legal Aspects of Project Management (3L)
 MGT 6011Y - Marketing Management (3L)

Note: Students will take six core modules and two electives (one elective from group A, one from group B).

9. Programme Plan – MSc Enterprise Systems Development and Management

(Full time)

	Module Code	Module	Hrs/WK L + P	Credits
Semester I	CSE 6027	Enterprise Applications Development	2+2	3
	CSE 6080	ERP & Change Management	2+2	3
	CSE 6081	Enterprise Data Management	2+2	3
	ENGG 6101	Principles of Project management	3+0	3
		Elective 1	(See section 8)	3
Semester II	CSE6209	Software Project management	3+0	3
	MGT5212	Human Resources and Quality Management	3+0	3
		Elective 2	(See section 8)	3
	CSE 6000	Project		12

(Part time)

	Module Code	Module	Hrs/WK	Credits
			L + P	
Semester I	CSE 6080	ERP & Change Management	2+2	3
	CSE 6081	Enterprise Data Management	2+2	3
	ENGG 6101	Principles of Project Management	3+0	3
Semester II	CSE 6209	Software Project Management	3+0	3
	MGT 5212	Human Resources and Quality Management	3+0	3
		Elective1	(See section 8)	3
Semester III	CSE 6027	Enterprise Applications Development	3+0	3
		Elective 2	(See section 8)	3
Semester IV	CSE 6000	Project		12

Note 1: An elective will be provided only if sufficient number of students have opted for it and depending on availability of resources.

Note 2: Some courses may be run during/after office hours depending on availability of resources.

10. Outline Syllabus

CSE 6209 - SOFTWARE PROJECT MANAGEMENT

Features of Software Projects, Project-Life Cycle, Team Organisation and People Management, Software Processes, Evaluation and Estimation Techniques, Scheduling Principles, Budgeting, Procurement and Contract Management, Resource Allocation, Risk Management, Testing Goals and Plan, Defects, Hypotheses, Testing Strategies and Methods, Quality Management, Capability Maturity Model, Configuration Management, Project Management Software Tools.

CSE 6027 - ENTERPRISE APPLICATIONS DEVELOPMENT

Design Patterns and Abstraction Layers in Enterprise Applications, organizing Domain Logic, Inversion of Control, Cross-Cutting Concerns, Mapping to Relational Databases, Transaction Management, Web Presentation Layer, Remoting and Web Services, Concurrency, Scripting, Testing, Using an Enterprise Framework, Tool Support, Latest Research in Enterprise Applications Development.

CSE 6080 - ERP & CHANGE MANAGEMENT

ERP Systems, Core Business Processes, System Thinking, Transition from MRP to ERP, Basic ERP model, Benefits and Challenges of ERP, BPR, ERP System Selection, ERP Design, ERP Implementation, ERP Standards, ERP Bolt-ons, ERP System Maintenance, General Ledger in ERP, Technology and International Considerations, Change Management, ERP and Supply Chain, ERP and Customer Relationship Management.

CSE 6081 - ENTERPRISE DATA MANAGEMENT

Business intelligence (BI), business continuity planning, performance, security, legal, interfacing (integration of systems), network planning, data warehousing, data mining, customer relationship management (CRM), supply chain management (SCM), data center architecture and management.

ENGG 6101 - PRINCIPLES OF PROJECT MANAGEMENT

Introduction to Principles of Project Management. Planning and Programming. Procurement Budgeting and Estimating. Project Control. Quality Management. Risk Management. Strategic Management. Project Appraisal. Project Completion Report. Case Studies.

MGT 5212 - HUMAN RESOURCES AND QUALITY MANAGEMENT

Managing and the Environment: the Management Challenge, the Evolution of Management Environment, Social Responsibility, and Ethics, the Global Management Environment. Planning: Decision Making, Planning, Strategy. Organising: Organisational Structure and Design, Job Analysis, Design, and Redesign Human Resource Management. Leading: Group Dynamics and Team Building, Motivation, Leadership, Interpersonal and Organisational Communication. Controlling: Control Systems, Managing Production and Operations, Managing Services, Managing Organisational Change. Growth, Technology and Innovation: Entrepreneurship and Growth, Technology and Innovation. Behavioural Issues in Quality Management: The role of management in sustaining continuous quality improvement, Culture Change & Quality, Building Commitment for Quality, Teamwork & Total Quality, Employee Involvement & Empowerment for Quality, Communication for Total Quality, Quality Training.

CSE 6082 - COMPUTER AND NETWORK SECURITY

Secure system design, access control, and protection - Buffer overflows and other common bugs - Malware - Fuzzing and tools for writing robust application code - sandboxing and isolation - User authentication - Security problems in network protocols - Denial of service attacks and spam email - Network defense tools – Network worms and bot-nets - Web security - Secure web site design - Wireless network security - Privacy issues

CSE 6083 - E-BUSINESS TECHNOLOGY

Architecture - Consumer oriented applications - Electronic payment systems – EDI – Intra and Interorganizational structure – Advertising – search and resource discovery, technology for online marketing, tracking and managing site visitor behavior, targeted e-mail and response management, technology analyses, business plans and system designs, inter- and intra-firm data exchange, customer relationship management, document management systems.

CSE 6084 - ENTERPRISE NETWORKING

Enterprise networking concepts; understanding enterprise network architecture; plan, design, implement, administer, maintain, and troubleshoot enterprise networks; enterprise network management; issues related to enterprise networks; applications using enterprise networks; security in enterprise networks.

CSE 6085 - ENTERPRISE ARCHITECTURE AND INTEGRATION

Application integration - Business process integration - Business process modeling - Development of integrative business applications - Dissolving organizational and technological silos - Enterprise application integration - Performance indicators – Process integration through hierarchical decomposition - Realizing the promise of RFID - Social matters - Success factors - Standards-based integration

ACT 5112 - PROJECT ECONOMICS AND FINANCE

Introduction to the Mauritian Economy - Major Projects in the Economy - Economics of Projects - Costing - Projects and Productivity - Estimating and Competitive Tendering - Investment Appraisal - Cash Flow and Financing Projects.

ENGG 6305 - PROCUREMENT MANAGEMENT

Basic steps in procurement, purchase planning, partners in a supply chain. Supplier audit and ethics in procurement. Public Procurement, Transparency and Equity. Risks and Relationships in Procurement Management. Cost reduction techniques including tendering procedures and negotiation. Supply contracts and common supply chain problems. Market information and sourcing for goods and services. Quality control and relevant regulations for ensuring safety in procurement. Environmentalism and green-purchasing. Product cycles and extended product responsibility.

LAW 5401 - LEGAL ASPECTS OF PROJECT MANAGEMENT

Introduction to Law. Brief Overview of Sources of Law and the Mauritian Legal System. Environmental and Safety Law. Contract. Formation and Conditions of Validity of a Contract. Effects of a Contract. Inexecution of a Contract. Alternative Dispute Resolution. Arbitration.

Le Contrat d'Entreprise. Les Obligations de l'Entrepreneur. La Sous-Traitance. La Co-Traitance. Les Obligations du Maître de l'Ouvrage.

Terms and Conditions of a Few Standard Contracts.

Brief Overview of Labour Law. Types of Contract. Rights and Duties of Employers and Employees. Disciplinary Measures including Dismissal.

MGT 6011Y - MARKETING MANAGEMENT

The module introduces the foundation of marketing management and its key concepts: the Marketing Concept, Customer Satisfaction and Customer Value. Topics covered will include: evolution in Marketing Management philosophy; the marketing environment (Internal and External environment); the marketing research process; Consumer and Business buying behaviour; Market segmentation, positioning and targeting; The Marketing mix: product, price, promotion and distribution strategy of firms; Social Responsibility and green marketing.

CSE 6000 - PROJECT

Student research project. Includes appropriate research methods training.