

## **MSc e-Business - LME504**

### **1. Introduction**

The rise of the new business environment has created the need for a new breed of managers and technicians. This innovative programme prepares participants for new challenges in their professional lives as the businesses they run or are employed in are increasingly becoming technology mediated and open to global influences.

The programme rationale is to equip students with the ability to integrate business management knowledge with technological skills so as to be the future drivers of the island's e-business, e-government and all other organisations going 'e'.

### **2. Objectives**

Businesses need both employees who are technologically competent to be able to build and maintain software systems, but also employees who, without being deeply knowledgeable of the technologies, will nevertheless be aware of the capabilities of the technologies in the development of business models and strategies.

At the end of the programme, participants will:

- be able to understand the major features and practice of e-management and use their skills and knowledge to fully understand how the new technologies are able to help organisations in building competitiveness; and
- gain a basic understanding of e-management fundamentals, but more especially, will be skilled in programming, building web pages, and internet applications, as well as in designing and managing information systems.

### **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**

A management, management-related or liberal arts degree or a technical degree (e.g. engineering, computer science).

Preference will be given to applicants with two years relevant work experience.

## 5. Programme Duration

The duration of the Postgraduate/MSc Programme should normally not exceed 4 years and in any case (under Flexible Learning Programme) not exceed 7 years.

	<b>Normal</b>	<b>Maximum</b>
Master's Degree:	2 Years	4 Years
Postgraduate Diploma:	2 Years	4 Years
Postgraduate Certificate:	1 Year	2 Years

## 6. Credits per Year: Minimum 6 credits subject to Regulation 5.

## 7. Minimum Credits Required for Awards

MSc Degree:	36 credits
Postgraduate Diploma: (Year 1 must be completed, including workshops)	27 credits
Postgraduate Certificate:	15 credits

## 8. Assessment

Each module will carry 100 marks and will be assessed as follows (unless otherwise specified).

Assessment will be based on a written examination of 3-hour duration and continuous assessment carrying a range of 10% to 40% of total marks. Continuous assessment may be based on laboratory works, and/or assignments and should include at least 1 class test.

For a student to pass a module, a minimum of 30% should be attained on both Continuous Assessment and Written Examination separately, with an overall total of a minimum of 40% on that module.

Each module of 90 hours duration carries 6 credits.

Dissertation will carry 6 credits.

**Submission Deadline** for dissertation:

Final copy: Last working day of August in the final year of the programme.

## 9. List of Modules

### **CORE MODULES**

<b>Code</b>	<b>Module Name</b>	<b>Hrs/Wk L+P</b>	<b>Credits</b>
CSE 6130Y	Telecommunications and the Web, and Developing Internet Applications	3+0	6
CSE 6230Y	Management Information Systems and Security for e-Business	3+0	6
MGT 6084Y	Management of e-business	3+0	6
MGT 6085Y	Strategic e-Marketing	3+0	6
MGT 6086Y	E-entrepreneurship and Strategic Thinking	3+0	6
MGT 6000Y	Dissertation	-	6

**ELECTIVE MODULE**

ECON 5214	Competitive Strategy and the Wealth of Nations	3+0	3
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**LEARNING SUPPORT WORKSHOPS (COMPULSORY)**

CSE 6030Y	Mobile Communications	-	0
LAWS 6100Y	Legal Aspects of e-Commerce	-	0
MGT 6087Y	Research Methods	-	0
MGT 6088Y	Management of Technology and Innovation	-	0

**10. Programme Plan****YEAR 1**

Code	Module Name	Hrs/Wk L+P	Credits
<b>CORE</b>			
MGT 6084Y	Management of e-Business	3+0	6
MGT 6085Y	Strategic e-Marketing	3+0	6
CSE 6130Y	Telecommunications and the Web, and Developing Internet Applications	3+0	6

**LEARNING SUPPORT WORKSHOPS**

MGT 6087Y	Research Methods (15 hours)	-	0
MGT 6088Y	Management of Technology and Innovation (15 hours)	-	0

**YEAR 2**

Code	Module Name	Hrs/Wk L+P	Credits
<b>CORE</b>			
MGT 6086Y	e-Entrepreneurship and Strategic Thinking	3+0	6
CSE 6230Y	Management Information Systems and Security for e-Business	3+0	6
MGT 6000Y	Dissertation	-	6
<b>ELECTIVE</b>			
ECON 5214	Competitive Strategy and the Wealth of Nations	3+0	3

**LEARNING SUPPORT WORKSHOPS**

CSE 6030Y	Mobile Communications (15 hours)	-	0
LAWS 6100Y	Legal Aspects of e-Commerce (15 hours)	-	0

## 11. Outline Syllabus

### **CSE 6030Y - MOBILE COMMUNICATIONS**

The interest in wireless technology has been booming since the last decades because of the numerous advantages they promise to offer. This in turn can explain their fast expanding growth that we are actually witnessing. This workshop is designed to course covers fundamental techniques in the management design and operation of these wireless networks *via* the following topics:

Introduction to mobile communication, different types of wireless communication, mobile communication, cellular systems, medium access techniques, radio propagation models, error control techniques, handoff, power control, common air protocols. Cellular Wireless Networks and System Principles.

### **CSE 6130Y - TELECOMMUNICATION AND THE WEB, AND DEVELOPING INTERNET APPLICATIONS**

Telecommunications and the Web: Data Communication, Transmission Systems, Data Network, LAN, Cellular Telephony and Mobile Comm. – Introduction to Network Design – Analysing Goals and Constraints – Network Architectures – Layered Models – OSI, Hierarchical Models – TCP/IP – IP structure and functions – TCP/IP – TCP structure and functions- Ethernet Systems – Shared (Repeater) Architectures – Ethernet Systems – Switched Architectures – TCP/IP – Addressing schemes – TCP/IP – Applications Protocols – NOS – Operating fundamentals – NOS – Services & Security, Web Servers – WAN Systems – Frame Relay – WAN Systems – ATM – Ethernet Systems – Design Options and Structures – Internetworking – General Gateways, Bridges – WAN Systems – ISDN & ASDL, etc. – HDTV, Digital TV and Interactive TV, VoIP – Network Management – Functions – Videoconferencing.

Developing Internet Applications: Introduction to Programming Web and specifically E-Commerce Applications - HTML – Client-Side Programming – JavaScript – Applets and Active X - Introduction to Server-Side Programming – Active Server Pages – Java Servlets – Java Server Pages – Further Server-Side Programming in ASP and Java – Session and Application Objects – Database Access – 3 Tier – Programming E-Commerce Applications – The Problem of State – Web Application Design – Specific Features of E-Commerce Applications – Catalogs, Shopping Baskets, etc – Handling Payments – E-Mail – Order Tracking – Statistics of a site – Search engines technology.

### **CSE 6230Y - MANAGEMENT INFORMATION SYSTEMS AND SECURITY FOR e-BUSINESS**

Management Information Systems (MIS): Management Information Systems: an overview, structure, Conceptual foundations: decision-making, information, humans as information processors, systems, planning and control, organization structure and management, Support systems for: planning control and decision-making, management of knowledge work, Information resources function: need, organization, allocation of scarce resources, end-user computing, Future developments, Networking and communications technology, e-business solutions and platforms, Developing e-commerce sites.

Security for e-business: Mathematical and social motivation – Methods of attack – The mathematical background to good algorithms – Non-deterministic polynomial (NP) problems such as factorisation, and modular arithmetic – Integrity and availability – The key distribution problem – Secure one-way hash algorithms and message digests – Asymmetric encryption and its uses – RSA, its principles, construction and use – Digital signatures and certificates, particularly X.509 – The problem of trust – Modelling trust – The hierarchical and accretion (Verisign and PGP) models – Secure protocols – S/MIME is the current e-commerce mechanism for secure transmission on the internet – Secure Electronic Transactions – Micro-payment systems – SNMP and Manufacturer's information base – Security architectures, particularly firewall principles and structures – DMZ firewalls – Mobile Agents and security – The evolving world of security and some new developments, such as quantum encryption.

### **ECON 5214 – COMPETITIVE STRATEGY AND THE WEALTH OF NATIONS**

Competition and Strategy: Core Concepts, Strategic Motives, Declining Industries and the Role of Strategy. Locations and Competitiveness: Comparative Advantage of Nations, Clusters and New Agendas for Institutions and Governments, Global Organisations and Global Strategies. Public Issues and Reforms: Urban and Environmental Concerns, Effective Health Care Systems and Public Private Partnerships. Case Studies.

**LAWS 6100Y - LEGAL ASPECTS OF e-COMMERCE**

Law of Contract Relevant to e-Commerce, Principles of Conflict of Laws, Intellectual Property Law, Domain Name, Trademark Copyright, Protection of Confidential Information, Data Protection and Secrecy on the Internet, Law of Passing-off, Revenue Law Aspects of e-Commerce transactions, Settlement of Disputes.

**MGT 6000Y - DISSERTATION**

Drawing upon relevant concepts and skills introduced during the programme, the work involves independent, in-depth research of approximately 20,000 words on an e-business-related topic.

**MGT 6084Y - MANAGEMENT OF e-BUSINESS**

'e' fundamentals: Le commerce électronique et son impact sur le développement économique de PVD et Pays en transition, Evolution du système commercial de 1890 à nos jours, le commerce électronique catalyseur de la mondialisation, La spécificité des opérations de commerce international et l'impact du commerce électronique sur l'efficacité des opérations, L'échange international et les avantages comparatifs du commerce électronique, Les clefs du commerce électronique, l'entreprise face à l'ouverture internationale, Les voies de réponse de l'entreprise, La dynamique sectorielle internationale, Les déterminants de la dynamique d'internationalisation, La gestion des risques financiers liés au commerce électronique, Études de Cas.

e-Business management: Strategic & Operational issues in management of electronically networked and virtual business organisations, Technology enabled business models, Global internetisation, Opportunities & Challenges on the internet economy, Planning-organising-leadership & control of e-business.

**MGT 6085Y - STRATEGIC e-MARKETING**

The module aims to develop a knowledge and understanding of the main theories to the use of internet for marketing and electronic commerce, and the application of these theories in the development of e-marketing strategies. Topics covered will include marketing on the internet; internet overview; the worldwide web and using it for business; constructing effective websites; internet user characteristics and behaviour; marketing knowledge; product and pricing on the net; targeting market segments and positioning on the net; the net as a distribution channel; e-marketing communications-Customer Relationship Management, the e-marketing plan; leveraging technology; net ethics and law; how to better manage your contacts; online resources for internet marketing; powersearching the web; cyberadvertising agencies; webservices and information.

**MGT 6086Y - e-ENTREPRENEURSHIP AND STRATEGIC THINKING**

e-Entrepreneurship: Jeu d'entreprise: exercice de simulation, l'entrepreneur ou l'art de concilier l'inconciliable, les sources de l'esprit d'entreprise, typologie des formes entrepreneuriales, entrepreneur et gouvernement d'entreprise, observation d'un entrepreneur, montage financier d'un démarrage, business plan.

Strategic Thinking and Management: Définition de la stratégie, Les fondements de la stratégie: l'économie des coûts de transaction, le processus stratégique: Vision, Mission et Objectifs, La segmentation, L'audit interne et externe: le nouvel ordre économique issu des accords de l'OMC, Les outils d'aide à la décision, définition de l'avantage concurrentiel et le modèle des ressources et compétences, Les stratégies de croissances, Les stratégies concurrentielles et fonctionnelles, La structure organisationnelle, La théorie de l'agence et l'identité de la firme, Évaluation et contrôle: le syndrome de l'éléphant. Étude de cas: analyse et synthèse.

**MGT 6087Y - RESEARCH METHODS**

Scientific Thought; the Research Process – Literature Review, Surveys and Sampling Design, The Choice of Analysis, Review of Basic Statistics, Regression Analysis, Analysis of Variance, Multiple Regression, Hypothesis Testing, Dummy Variable in Regression, One Way ANOVA. The Research Proposal.

**MGT 6088Y - MANAGEMENT OF TECHNOLOGY AND INNOVATION**

Introduction, Technological Environment, Innovation, Diffusion, Technology and Competition, Process Innovation, Value Chains, and Organisation, Overview of Technology Strategy.

