



UNIVERSITY
of
TECHNOLOGY,
MAURITIUS

School of Innovative Technologies & Engineering

Department of Business Informatics and Software Engineering

MSc Business & Enterprise Systems

PROGRAMME DOCUMENT

Version 3.0
MBES v3.0
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University of Technology, Mauritius

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MSc BUSINESS & ENTERPRISE SYSTEMS

A. Programme Information

MSc Business and Enterprise Systems Programme is for people who have recently graduated from a computing-related degree and want to increase their knowledge and skills before starting work, or are at an early stage in their careers. It is also suitable for graduates from management, IT, manufacturing, engineering, science, applied science and related disciplines. This will allow already in business practitioners to enhance their professional development within their current employment.

It focuses on the skills needed to provide successful technical solutions to business problems. You gain the necessary skills to design, specify and build internet-enabled enterprise systems.

This Programme will help you find positions in both the private and public sectors in ICT and operations management with direct and indirect responsibilities for IT/ICT, including project management. There are also corresponding opportunities in IT, management consultancy, including the public sector, technology companies, banking and financial institutions, insurance organizations. You can find careers working in areas such as developing advanced enterprise systems, integrating legacy systems for internet-enabled enterprise applications, designing contemporary business information systems, independent consultancy as a senior developer or freelance.

B. Programme Aims

The aim of this 'programme is to develop practical skills and critical awareness in relation to the state-of-the-art in business/enterprise systems integration (from a service-oriented perspective). The practical elements of the course will be supported by Enterprise Class Open source ERP systems as well as other ERP systems such as SAP/Oracle etc.,. Broadly speaking, you will gain experience of ERP systems understanding, implementation methods and understand Business Processes and Technology Management. Consequently, one will get hands-on experience of technology and systems that will enhance employability.

C. Programme Objectives

After successful completion of the Programme, the graduates should:

- model key aspects of business in an integrated and logical manner
- demonstrate a critical and practical understanding of the issues relevant to business systems integration and use in the context of modern business environments
- demonstrate a critical and practical understanding of Enterprise Resource Planning Systems (ERP) and the role they play in business systems integration
- demonstrate a critical and practical understanding of the professional skills necessary for effective business systems integration
- reflect, critically and in-depth, on relevant aspects of the state-of-the art of both the practice and theory of business systems integration

PART I – Regulations

D. General Entry Requirements

As per UTM'S Admission Regulations, and 'Admission to Programmes of Study at Master's Degree Level'

E. Programme Entry Requirements

At least an Honours Degree or other qualifications (academic or professional) acceptable to the University of Technology, Mauritius with some mathematical or numerical analysis knowledge

F. Programme Mode and Duration

One Semester consists of 15 weeks (excluding examination period)

Full Time: 1 Year (2 semesters)

Part Time: 1½ Years (3 semesters)

G. Teaching and Learning Strategies

- Lectures, Tutorials and Practical
- Class Tests and Assignments
- Industrial Project
- Workshops / Seminars / Lab Sessions
- Structured Discussions & Self Directed Study
- Case Study material & scenarios centred on real world problems

H. Student Support and Guidance

Academic Tutoring: 3 hours per week per module

I. Attendance Requirements

As per UTM's Regulations and Policy

J. Credit System

1 module = 3 or 4 credits

Industrial Project = 12 credits

K. Student Progress and Assessment

The programme is delivered mainly through lectures, tutorials, and practical laboratory sessions. Students are expected to be as autonomous and research oriented as possible and activities may include reading research papers, delivering presentations, taking part in quizzes, case-studying amongst others.

Each module carries 100 marks and unless otherwise specified, will be assessed as follows:

Written examination, inclusive of reading time, of duration of 2 - 3 hours for 3 credits modules and not less than 3 hours for 4 credits modules and continuous assessment carrying up to 40% of total marks. Continuous assessment can be based on a combination of assignments, field study, workshops and class tests.

Project on an Industrial placement

The students will undergo a six months project in collaboration with the industry. This project will be jointly supervised by an internal academic staff and an external representative from the industry local or overseas through UTM linkages

L. Evaluation and Performance

The percentage mark contributes a 100 percent weighting towards the degree classification.

Maximum marks attainable: 1100

Module grading structure:

Grade	Marks x (%)
A	$70 \leq x$
B	$60 \leq x < 70$
C	$50 \leq x < 60$
D	$40 \leq x < 50$
F	$x < 40$
A-D	Pass
F	Fail

M. Award Classification

Overall weighted mark x (%)	Classification
$70 \leq x$	MSc with Distinction
$60 \leq x < 70$	MSc with Merit
$40 \leq x < 60$	MSc
$x < 40$	No Award

Minimum Credits Required for Award of:

Master's Degree:	42
Postgraduate Diploma:	30
Postgraduate Certificate:	18

N. Programme Organisation & Management

Programme Coordinator: Dr. S. Panchoo

Contact Details:

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Part II - Programme Structure

O. MSc Business & Enterprise Systems – Full Time (Version 3.0)

Semester 1				Semester 2			
Code	Modules	Hrs/Wk L + P/T	Credits	Code	Modules	Hrs/Wk L + P/T	Credits
ISM5107C	ERP Systems Theory & Deployment	2+2	4	WAT5114C	Service Oriented Architecture	2+2	4
SDT5112C	Business Process Re-Engineering & Modelling	2+2	4	ISM5123C	Technology Entrepreneurship	2+2	4
SCG5121C	Professional Research & Development	2+2	4	SCG5122C	Data Mining & Statistics	2+2	4
CAN5110C	ICT Controls & Change Management	2+1	3	ISM5115C	Global IT Management	2+1	3
PROJ5202C	Industrial Project						12

P. MSc Business & Enterprise Systems – Part Time (Version 3.0)

Semester 1				Semester 2			
Code	Modules	Hrs/Wk L + P/T	Credits	Code	Modules	Hrs/Wk L + P/T	Credits
ISM5107C	ERP Systems Theory & Deployment	2+2	4	CAN5110C	ICT Controls & Change Management	2+1	3
SDT5112C	Business Process Re-Engineering & Modelling	2+2	4	WAT5114C	Service Oriented Architecture	2+2	4
SCG5121C	Professional Research & Development	2+2	4	ISM5123C	Technology Entrepreneurship	2+2	4
				PROJ5202C	Industrial Project		

Semester 3			
Code	Modules	Hrs/Wk L + P/T	Credits
SCG5122C	Data Mining & Statistics	2+2	4
ISM5115C	Global IT Management	2+1	3
PROJ5202C	Industrial Project		12

Q. MODULE OUTLINE**CAN5110C: ICT CONTROLS & CHANGE MANAGEMENT**

- Control Environment,
- Change management procedures,
- Security policies, standards and processes,
- Technical support policies and procedures,
- Hardware/software configuration,
- Installation, testing, management standards, policies and procedures, Disaster recovery/backup and recovery procedures
- COBIT, COSO, SOX, IT Application controls
- Data/information/knowledge management,
- Approaches to information integration and business analytics
- Data Migration,
- Data Cleansing and preparation,
- KPI Integration,
- Business Performance Management, GAP Analysis,
- Digital Dashboard, Balance Scorecard, ITIL

SDT5112C: BUSINESS PROCESS RE-ENGINEERING & MODELING

- Business Process Management
- Business Process Improvement
- Kaizen
- Process Improvement
- Workflow
- Process Re-engineering Life Cycle
- ERP
- Knowledge Management
- Human Resource Management Systems
- Customer Relationship Management
- Groupware & Collaborative Systems
- Change Management
- Business Model
- Business Modelling Tools
- Programming Language tools for BPM (BPMN, BPEL)
- Business Reference Model
- Business Process Integration
- Business Process Re-engineering

WAT5114C: SERVICE ORIENTED ARCHITECTURE

- SOA - Cloud Computing, SaaS, Distributed computing
- Challenges in adopting SOA
- Web Service Approach
- SOA & Web service Protocols
- SOA & Network Management Architecture
- Web 2.0
- Business Process Maintenance, Integration, applications & security
- Web services Description Language
- Service Orientation: Standardised service contract, Service Loose Coupling, Service Abstraction, Service re-usability, service autonomy, service granularity, service statelessness, service discoverability, service compensability
- Service Reference Architecture

- SOA design principles
- Enterprise Application Integration
- Other SOA Concepts: SOAP, RPC, REST, WEB SERVICES, CORBA
- Service Oriented Modelling

SCG5121C: PROFESSIONAL RESEARCH & DEVELOPMENT

- Strategic Research Advancement
- Strategic Planning Support
- Industry collaboration & partnerships
- Program management
- Communication of Research and Research Opportunities
- Planning & Managing Research
- Analysing, Interpreting and Reporting
- Enhancement of collaboration
- Multi-disciplinary Approaches
- Field Research
- Standards & Ethics
- Organization and human resources issues in R&D

ISM5107C: ERP SYSTEMS THEORY & DEPLOYMENT

- Rationale, theories and practices around Enterprise Resource Planning systems (ERP)
- Development of the knowledge required to understand the forces driving ERP design and implementation.
- Enterprise systems strategy and rationale
- Issues of organisational implementation and business services,
- Processes and functions from an ERP perspective.
- Business process integration with an ERP environment
- Implications of implementing ERP systems in organisations
- Development of key skills necessary to deploy and configure ERP systems
- Business process improvement alongside enterprise systems configuration and configuration management

ISM5123C: TECHNOLOGY ENTREPRENEURSHIP

- Sequential process Investigation
- Transforming technology-driven idea into customer-driven product,
- Capturing value of innovative product
- Entrepreneurial start-up venture
- Perspective of the entrepreneur
- Open innovation models
- Entrepreneurial ventures.
- Intellectual property,
- High-tech product development,
- Venture finance,
- High-tech market strategy,
- Strategic alliances,
- Entrepreneurial leadership skills.
- Commercializing technology
- Commercial development process
- Technology exploitation through licensing,
- New challenges to global patent strategies,
- Organization and human resources issues in R&D

SCG5122C: DATA MINING & STATISTICS

- Data-mining methods
- Industry trends
- Decision trees,
- Regression,
- Neural nets,
- Clustering,
- Network analysis, and feature selection.
- Evaluation of business-intelligence systems,
- Data warehousing,
- Privacy issues,
- Strategic use of information, and emerging data-mining methods
- Econometrics

ISM5115C: GLOBAL IT MANAGEMENT

- Global information technology environment
- Framework for building national information structure
- International business opportunities on the information superhighway
- Problem of data quality in a developing economy
- How can information technology enable developing countries to integrate into the global economy?
- Information technology planning and architectures for networked global organizations
- Information systems resource structure and management in multinational organizations
- Issues in Global Outsourcing
- Global software outsourcing
- Global management support systems
- Strategic application of information technology in global business
- Developing and implementing global information systems

PROJ5202: INDUSTRIAL PROJECT

Students will undergo a six months project in collaboration with the industry. An internal academic staff and an external representative from the industry local or overseas through UTM linkages will jointly supervise this project. The Project would include a project write up and presentation.