



UNIVERSITY
of
TECHNOLOGY,
MAURITIUS

School of Innovative Technologies and Engineering
Department of Business Informatics and Software Engineering

BSc (Hons) Computing and Information Systems (Top Up)

PROGRAMME DOCUMENT

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University of Technology, Mauritius
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A. PROGRAMME INFORMATION

This course has been designed for students already possessing an Advanced Diploma in Information Technology or any IT related discipline to upgrade their diploma to a degree level. The course content is market-driven and particularly aims to produce high caliber graduates to be readily employed in a variety of computing disciplines. This programme will give students an excellent grounding in both theoretical and practical use of computerised systems in organisations.

This Top-up degree may be taken over one year full-time or one and a half years part-time whereby students will have the opportunity to further enhance their career prospects by converting their diploma into a full BSc degree. Students will have an in-depth exposure to various areas of Information Technology as well as current industry standard software.

B. PROGRAMME AIMS & OBJECTIVES

The programme aims to equip students with the skills required to become competent practitioners in using, developing and managing modern computer / information systems. The course consists of a combination of core modules and a project. There are two categories for the final year project namely Network & Communication or System Development project. Students will have the possibility to opt for any one of those two categories for their final year project. Graduates of this course will possess the skills necessary to analyse, design and implement computerised systems. Possible careers include: analyst/programmer, network administrator, systems analyst, database administrator or web application developer amongst others.

PART I – REGULATIONS

C. GENERAL ENTRY REQUIREMENTS

As per UTM'S Admission Regulations, and 'Admission to Programmes of Study at First Degree Level' or APL / APEL requirements.

D. PROGRAMME ENTRY REQUIREMENTS

A Diploma in Information Technology or a Diploma in any relevant IT discipline from a recognized institution and as approved by the Selection Committee.

E. PROGRAMME MODE AND DURATION

Full Time: 1 year [2 semesters]
Part Time: 1 ½ years [3 semesters]

F. TEACHING AND LEARNING STRATEGIES

- Lectures, Tutorials and Practical Laboratory Sessions;
- Class Tests and Assignments;
- Structured Discussions and Self-Directed Study;
- Workshops and Seminars;
- Case Study of real world problems.

G. STUDENT SUPPORT AND GUIDANCE

Each cohort of the programme is allocated a Programme Coordinator who acts as a liaison between the students and school management and provides support for academic management of the programme.

H. ATTENDANCE REQUIREMENTS

As per UTM's Regulations and Policy.

I. CREDIT SYSTEM

1 module = 3 or 4 credits

Final Year Project = 9 credits

J. STUDENT PROGRESS AND ASSESSMENT

For the award of an honours degree, all modules must be passed overall with passes in the examinations, coursework and other forms of assessment. To clear a module, students must secure at least 40% overall.

The programme is delivered mainly through lectures, tutorials, and practical laboratory sessions. Each module carries 100 marks and unless otherwise specified will be assessed as follows:

- Written and/or practical examination, and continuous assessment carrying up to 50% of total marks.
- Continuous assessment can be based on a combination of assignments, workshops, practical and class tests.
- Modules which are evaluated on continuous assessment only (100% coursework) must consist of a **minimum of three assessments, inclusive of one class test**. The following list of modules are evaluated by continuous assessment only: Web-based Information Systems.
- The system development project will carry 300 marks (9 credits)

Module grading structure:

Grade	Marks x (%)
A	$70 \leq x \leq 100$
B	$60 \leq x < 70$
C	$50 \leq x < 60$
D	$40 \leq x < 50$
F	$x < 40$
A-D	Pass
F	Fail

K. EVALUATION OF PERFORMANCE

The % mark at Level 3 contribute 100% weighting towards the degree classification.

L. AWARD CLASSIFICATION

Overall weighted mark y (%)

$$70 \leq y \leq 100$$

$$60 \leq y < 70$$

$$50 \leq y < 60$$

$$45 \leq y < 50$$

$$40 \leq y < 45$$

$$y < 40$$

Classification

1st Class Honours

2nd Class 1st Division Honours

2nd Class 2nd Division Honours

3rd Class Honours

Pass Degree

No Award

M. PROGRAMME ORGANISATION AND MANAGEMENT

Programme Director: Mr. P. Kanaksabee

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PART II - Programme Structure

N. BSc (Hons) Computing and Information Systems – FULL TIME (v 2.2)

YEAR 3 (Level 3)								
Semester 1				Semester 2				
Code	Module	Hrs/Wk L + T/P	Credits	Code	Module	Hrs/Wk L + T/ P	Credits	
SEM3106C	IT Project Management	2+1	3	ISM3116C	Strategic Information Systems	2+2	4	
DBT3108C	Enterprise Database Systems	2+2	4	SCG3102C	Distributed Systems	2+2	4	
CAN3102C	Communication & Networking Design & Management	2+2	4	ISM3119C	Enterprise Software Process	2+2	4	
WAT3115C	Web-based Information Systems	2+2	4					
PROJ3105C / PROJ3113C	System Development Project / Network & Communication Project							9

O. BSc (Hons) Computing and Information Systems – PART TIME (v 2.2)

YEAR 3 (Level 3)							
Semester 1				Semester 2			
Code	Module	Hrs/Wk L + T/P	Credits	Code	Module	Hrs/Wk L + T/P	Credits
SEM3106C	IT Project Management	2+1	3	WAT3115C	Web-based Information Systems	2+2	4
DBT3108C	Enterprise Database Systems	2+2	4	ISM3116C	Strategic Information Systems	2+2	4
CAN3102C	Communication & Networking Design & Management	2+2	4	SCG3102C	Distributed Systems	2+2	4
				PROJ3105C / PROJ3113C	System Development Project / Network & Communication Project		

YEAR 3 (Level 3)			
Semester 3			
Code	Module	Hrs/Wk L + T/P	Credits
ISM3119C	Enterprise Software Process	2+2	4
PROJ3105C / PROJ3113C	System Development Project / Network & Communication Project		9

PART III

Module Outline

SEM3106C: IT Project Management

Project Management Fundamentals, Feasibility Study for IT projects, Project Planning , Techniques for Project Scheduling, Resource management, Risk management , Project Monitoring, Quality Management in IT Projects, Testing techniques, IT Governance, Project Evaluation and Termination.

DBT3108C: Enterprise Database Systems

The success of many organisations depends on information stored in database management systems. Given the importance of such systems, it is essential that managers responsible for IT understand the underlying DBMS principles examined in this module. This module serves to provide a perspective on database management systems structure and function. The Web-based database applications, which are the driving force behind e-commerce, are discussed in the module. Two popular technologies in the database area data warehouse and data mining for decision support are introduced.

CAN3102C: Communication & Network - Design & Management

Introduction to enterprise networking. Network Planning. Network Design. Network Management: Configuration, Fault, Performance and Cost Management, End-user Support, Network Management Tools, Simple Network Management Protocol, ASN1.0, Basic Encoding Rules. Network Security: Firewalling, DMZ, subnetting, Gateways. Computer malware. LAN Technologies, Gigabit Ethernet, Mobile LAN (IEEE 802.11X), Bluetooth, Ad-Hoc networks. WAN Technologies: xDSL, Frame Relay, ATM, Wireless. Implementation: NAT, Proxy, Firewall, popular services (FTP, HTTP, SMTP, DNS).

WAT3115C: Web-Based Information Systems

Overview of .NET framework, Comparing relationship with XML and databases and how this technology can be consumed in computerised information systems, XML, DTD, XSL, DOM. Validations, Authentications, ADO.NET: setting up of an online database on a server; rendering database for display to the client through dynamic scripting.

ISM3116C: Strategic Information Systems

Understanding the business environment, Creating Business Advantage with IT, Business Models, Internetworking Infrastructure, Business Vision, Implementing a Vision, Evaluating Business Strategies and the use of Information Systems, Information Systems Organization and Personnel Considerations, Integrating information systems into the Business Plan, Information Systems Management Issues.

SCG3102C: Distributed Systems

Centralized computing, distributed computing, client server computing, Interprocess Communication, Client Server Architecture, Socket programming, Middleware, Client and server side applications, Database Connectivity, Remote Message Invocation

ISM3119C: Enterprise Software Process

Business Engineering & Enterprise Optimization, Business Process Integration, Business Planning & Controlling, Business Process Re-Engineering, Integration of Business Processes with Information Technology, Change Integration, Implementation Methodology & Strategies, Technical Infrastructure & Architecture, The Keys to Implementing ERP in a Global Environment & Work plans.

PROJ3105C: System Development Project

Run a full-fledge software development project: from concept, through logical modelling and up to physical implementation. Demonstration of core competencies acquired during the degree.

PROJ3113C: Network & Communication Project

Project to be developed will be on Networking (refer to Handbook).