



UNIVERSITY
of
TECHNOLOGY,
MAURITIUS

School of Innovative Technologies & Engineering

Department of Business Informatics & Software Engineering

MSc Enterprise Security & Digital Forensics

PROGRAMME DOCUMENT

Version 2.0
MESDF 2.0
JULY 2021

University of Technology, Mauritius

La Tour Koenig, Pointe aux Sables, 11134, Mauritius

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A. Programme Information

MSc in Enterprise Security and Digital Forensics provides specialised study for students with an interest in areas such as enterprise security, security management, cryptography, digital forensics, controls, cloud frameworks, law/regulations, security technologies and audit areas.

Most postgraduate courses are based upon a broad range of modules. However, we recognise the desire for some students to specialise in specific areas in order to increase employment prospects in their area of interest.

The MSc in Enterprise Security and Digital Forensics is designed for candidates wishing to gain employment in enterprise security and digital forensics related areas such as with public and private security agencies, computer companies, local police forces and other government agencies etc.

B. Programme Aims

This Programme will provide both theory and practice and will enable students to gain the skills to develop a management security policy for organisations, design a secure wireless or wired computer network, manage a forensic case and understand and perform detailed technical analyses of computer-based evidence as well as many other aspects of computer and data security. It will further provide extensive understanding of security-based architectures as well as developing skill in the use of tools to test and evaluate such systems.

C. Programme Objectives

After successful completion of the Programme, the graduates should:

- display a mastery of the principal skill required for work in security & forensics department
- have achieved broad understanding and knowledge, and have an interest in and appreciation of risk assessment, major security issues, policies, securing software, cloud concepts-security etc
- be logical and analytical, and possess skill in security, biometrics, high level forensics research and investigation
- become knowledgeable on core security focusing on predictions and or potential threats and analysis and core practice and actions that are required

PART I – Regulations

D. General Entry Requirements

As per UTM's Admission Regulations.

E. Programme Entry Requirements

At least an Honours Degree with significant Information security, Networking or IT content.

For instance, BSc (Hons) Degree in Computer, Information Technology, Engineering, Security or other qualifications (academic or professional) acceptable to the University of Technology, Mauritius

F. Programme Mode and Duration

Full Time: Minimum of 1 Year (2 semesters), Maximum of 3 years (6 semesters)

Part Time: Minimum of 1½ Years (3 semesters), Maximum of 3½ Years (7 semesters)

G. Teaching and Learning Strategies

- Lectures (L), Tutorials (T), Practical Laboratory Sessions (P) and Self-Development Activities
- Class Tests and Assignments
- Dissertation
- Workshops / Seminars / Lab Sessions
- Structured Discussions & Self Directed Study (SD)
- Case Study material & scenarios centred on real world problems

H. 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.

I. Attendance Requirements

As per UTM's Regulations and Policy

J. Credit System

This programme is aligned with the European Credit and Transfer System (ECTS).

Six-credit modules consist of 45 hours of delivery and 105 hours of self-learning, self-study, guest lecture, etc.

The delivery could be any combination of face-to-face, blended, online, seminar, workshop or joint session.

1 module = 6 credits

Dissertation = 18 credits

Minimum Credits Required for Award of:

Master's Degree: 90

Postgraduate Diploma: 60

Postgraduate Certificate: 30

K. Student Progress and Assessment

The programme may be delivered in different modes : face to face, online or blended modes, through lectures (L), tutorials (T), and practical (P) 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 and/ or practical examination and continuous assessment, carrying up to 50% of total marks.

Continuous assessment can be based on a combination of assignments, field study, workshops and class tests.

Module Research Methodology and Ethics may be assessed by 100% coursework.

L. Evaluation and Performance

The percentage mark contributes a 100% weighting towards the degree classification

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 y (%)	Classification
$70 \leq y$	MSc with Distinction
$60 \leq y < 70$	MSc with Merit
$40 \leq y < 60$	MSc
$y < 40$	No Award

N. Programme Organisation & Management

Programme Director and Coordinator: Dr. Shireen Panchoo
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Part II - Programme Structure

O. MSc Enterprise Security & Digital Forensics – Full Time (Version 2.0)

Semester 1				Semester 2			
Code	Modules	Hrs/Wk L + P/T +SD	Credits	Code	Modules	Hrs/Wk L + P/T + SD	Credits
SECU5126C	Information Security and Ethical Hacking	2+1+7	6	SECU5114C	Secure Infrastructure Design	2+1+7	6
ISM5120C	Digital Forensics & Investigation	2+1+7	6	ISM5122C	Information Risks & Controls	2+1+7	6
SECU5127C	Enterprise Cloud Security Concepts & Frameworks	2+1+7	6	SECU5117C	Mobile & Wireless Network Security	2+1+7	6
SECU5116C	Standards & Security Technologies	2+1+7	6	ISM5121C	Cybercrime & Law	2+1+7	6
SEM5122C	Research Methodology and Ethics	2+1+7	6	SECU5125C	Blockchain Security	2+1+7	6
SECU5131C	Machine Learning in Cybersecurity	2+1+7	6	ISM5132C	Information Security Management	2+1+7	6
PROJ5202C	Dissertation						18

P. MSc Enterprise Security & Digital Forensics – Part Time (Version 2.0)

Semester 1				Semester 2			
Code	Modules	Hrs/Wk L + P/T +SD	Credits	Code	Modules	Hrs/Wk L + P/T +SD	Credits
SECU5126C	Information Security and Ethical Hacking	2 + 1+7	6	SECU5127C	Enterprise Cloud Security Concepts & Frameworks	2 + 1+7	6
SECU5116C	Standards & Security Technologies	2 + 1+7	6	SECU5114C	Secure Infrastructure Design	2 + 1+7	6
SEM5122C	Research Methodology and Ethics	2+1+7	6	ISM5122C	Information Risks & Controls	2 + 1+7	6
ISM5120C	Digital Forensics & Investigation	2+1+7	6	SECU5131C	Machine Learning in Cybersecurity	2 + 1+7	6
				PROJ5102	Dissertation		

Semester 3			
Code	Modules	Hrs/Wk L + P/T +SD	Credits
SECU5125C	Blockchain Security	2 + 1+7	6
ISM5121C	Cybercrime & Law	2 + 1+7	6
SECU5117C	Mobile & Wireless Network Security	2+1+7	6
ISM5132C	Information Security Management	2 + 1+7	6
PROJ5202C	Dissertation		18