ACADEMIC GUIDEBOOK

MASTER BY COURSEWORK PROGRAMME

ACADEMIC SESSION 2026/2027

FACULTY OF COMPUTER SCIENCE AND MATHEMATICS

FACULTY OF COMPUTER SCIENCE AND MATHEMATICS

Academic Guidebook
Master By Coursework Programme

This academic guidebook is intended for postgraduate students enrolled in the Faculty of Computer Science and Mathematics's master by coursework programme for the 2026/2027 intake session.

Prepared by:
Committee of FSKM Guidebook

Set in Tahoma

Design : Rosmayati Mohemad
Layout : Rosmayati Mohemad

Editorial Board

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Words from the Dean

Alhamdulillah...

Assalamualaikum w.bt. and greetings,

Welcome to the Faculty of Computer Science and Mathematics (FSKM), Universiti Malaysia Terengganu (UMT). Congratulations to all new students who have successfully become part of the FSKM community. Your decision to pursue studies at this faculty is indeed a wise step towards building a bright future in the fields of Computer Science and Mathematics.

FSKM is committed to providing a conducive learning environment as well as a curriculum aligned with industry needs. We believe that learning is not limited to the classroom, but also takes place through practical experiences, research, and various co-curricular activities that will shape you into competent, innovative, and competitive graduates.

This Academic Guidebook has been specially published for new FSKM students for the 2026/2027 intake. It contains information about the faculty, general guidelines, student dress code and appearance regulations, as well as the curriculum structure for each academic programme under FSKM. It is hoped that this guidebook will serve as a useful reference and guide throughout your studies at FSKM until graduation.

Finally, I hope that you will make the most of every opportunity at UMT, be proactive in your learning, and continue striving for academic excellence and personal growth. Remember that every challenge is an opportunity to grow and become better. Wishing you every success, and may achievement always accompany your academic journey at FSKM, UMT.

Thank you.

Prof. Ts. Dr. Muhammad Suzuri Hitam
Dean
Faculty of Computer Science and Mathematics

About UMT

Universiti Malaysia Terengganu (UMT) started with a Fisheries and Ocean Science Centre in 1979, which offers training facilities to students of the Fisheries and Ocean Science Programme in addition to providing research facilities to lecturers. Through the restructuring of the academic programme at Universiti Putra Malaysia (UPM), the entire Faculty of Fisheries and Ocean Sciences was transferred to Terengganu and given a new name, the Faculty of Applied Science and Technology (FST) starting in June 1996. The Faculty of Science and Specialized Arts (FSSI) and the Matriculation Study Centre (PPM) were also established.

From June 1996, this campus was recognized as a centre of responsibility and named Universiti Putra Malaysia Terengganu Branch (UPMT) and headed by a Rector. On 5 May 1999, the council of ministers agreed to approve the proposal for the establishment of Terengganu University College (KUT). KUT becomes an affiliated campus of UPM, where KUT students graduate from UPM. KUT officially changed its name to Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) on 1 July 2001.

Starting on 1 February 2007, equivalent to 13 Muharram 1428 H, another history was created in the education system in Malaysia. In an effort to strengthen the position of the National Public University, six university colleges have gone through rebranding. Now KUSTEM is known as Universiti Malaysia Terengganu.

UMT has nine academic responsibility centres and four research institutes namely;

1. Faculty of Computer Science and Mathematics
2. Faculty of Ocean Engineering Technology
3. Faculty of Fisheries and Aquaculture Sciences
4. Faculty of Food Sciences and Agrotechnology
5. Faculty of Science and Marine Environment
6. Faculty of Business, Economics and Social
7. Faculty of Maritime Studies
8. Centre for Foundation & Continuing Education
9. STEM Foundation Centre
10. Institute of Oceanography and Environment
11. Institute of Tropical Aquaculture and Fisheries
12. Institute of Climate Adaptation and Marine Biotechnology
13. Institute of Tropical Biodiversity and Sustainable Development

UMT Vision, Mission, Objectives & Slogan

- Explores all areas related to Science, Technology and Natural Resource Management through research.
- Provides the latest facilities (laboratories, libraries, computing and environment) to support the development of knowledge, learning and scholarship.
- Offers excellent programmes of study that meet current and future needs. Produces graduates who are responsible, knowledgeable, confident and competent.
- Plays an active role in the development of social, economic and education through the expansion services specifically to the local community of the East Coast Peninsular and to the Malaysians, in general.

SECTION A

Information of Faculty of Computer Science and Mathematics

About FSKM

The Faculty of Computer Science and Mathematics (FSKM) was officially established on 1st January 2024, as a result of the restructuring of the Faculty of Ocean Engineering Technology and Informatics. FSKM is an academic entity at UMT that provides high-quality education in the field of computing and mathematics at both undergraduate and postgraduate levels.

The establishment of FSKM is to bring together expertise in the fields of software engineering, maritime informatics, mobile computing, applied mathematics, financial mathematics, and data analytics under one centre of responsibility in supporting the main thrust of the university in line with the vision and mission of UMT.

In line with the faculty's mission, FSKM's target is to produce graduates who are moral, skilled, trained, competitive, and have an identity to meet the needs of the country's workforce.

FSKM offered 6 undergraduate programmes with the duration of the study being 7 semesters (3.5 years). The programmes that FSKM offers are as follows:-

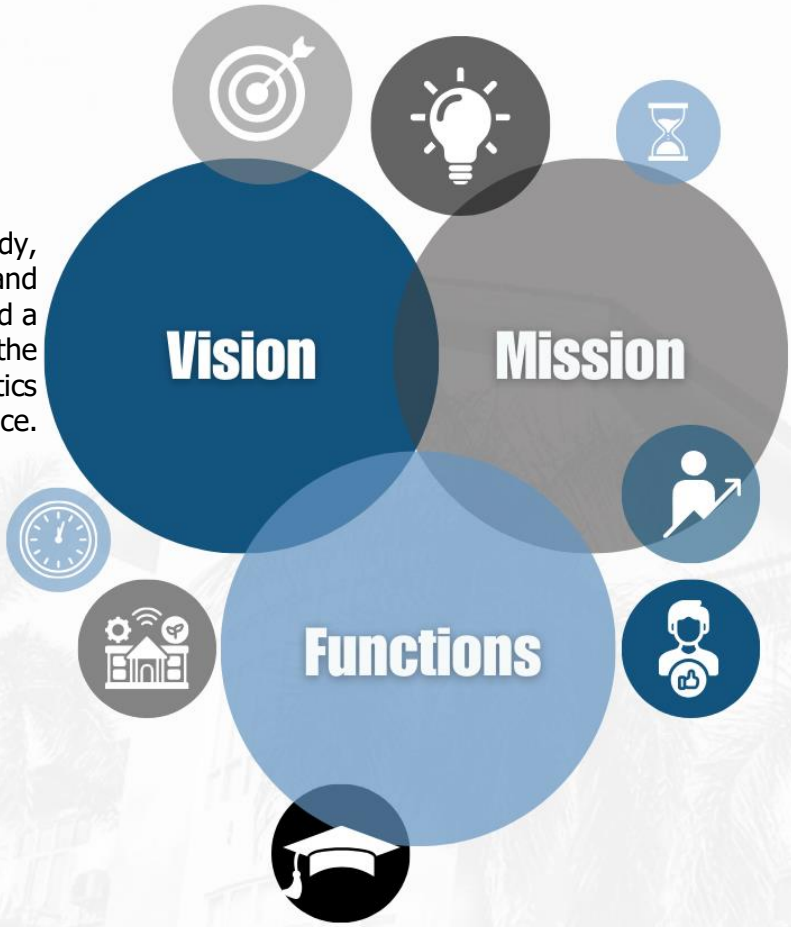
1. Bachelor of Computer Science (Software Engineering) with Honours
2. Bachelor of Computer Science with Maritime Informatics (Honours)
3. Bachelor of Computer Science (Mobile Computing) with Honours
4. Bachelor of Science (Applied Mathematics) with Honours
5. Bachelor of Science (Financial Mathematics) with Honours
6. Bachelor of Science (Data Analytics) with Honours

In addition, FSKM also offers postgraduate study programmes either through coursework or research, as follows:-

1. Master of Mathematics (by Coursework)
2. Master of Statistics in Marine Science (by Coursework)
3. Master of Computer Science (by Coursework)
4. Master of Information Technology (by Coursework)
5. Master of Science (Research)
6. Doctor of Philosophy (Research)

FSKM Vision, Mission & Functions

Being a center of study, research and development and a broad knowledge in the field of Mathematics and Computer Science.



Being a center of study, research and development and a broad knowledge in the field of Mathematics and Computer Science.

- Supports the mission of the university to become the premier centre of learning and research by contributing to the progress of humankind and exploration of knowledge and also to the creation of wealth and national development.
- Provides trained manpower with professional skills, high self-discipline and positive work ethics.
- Produces graduates who are sensitive to management ideas, responsive to change and become a role-model for students and community.
- Serves society through the dissemination of ideas and new practices and seek solutions to current problems in society.
- Establishes relationships with other universities, institutions and the industry for mutual benefit and the national development.
- Supports the mission of the university to become an organised centre of research and learning as well as providing good services and exploring in a new technologies.

FSKM Management Committee

1. Prof. Ts. Dr. Muhammad Suzuri Hitam
DEAN

2. Assoc. Prof. Dr. Rosmayati Mohemad
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3. Dr. Ilyani Abdullah
DEPUTY DEAN (TALENT & RESEARCH)

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5. Assoc. Prof. Ts. Dr. Zuriana Abu Bakar
HEAD OF PROGRAMME, BACHELOR OF COMPUTER SCIENCE WITH MARITIME INFORMATICS (HONOURS)

6. Assoc. Prof. Ts. Dr. Amir Ngah
HEAD OF PROGRAMME, BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING) WITH HONOURS

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CHAIR OF COMPUTER

8. Assoc. Prof. Dr. Shalela Mohd Mahali
HEAD OF PROGRAMME, BACHELOR OF SCIENCE (APPLIED MATHEMATICS) WITH HONOURS

9. Assoc. Prof. Dr. Binyamin Yusoff
HEAD OF PROGRAMME, BACHELOR OF SCIENCE (FINANCIAL MATHEMATICS) WITH HONOURS

10. Prof. Dr. Muhamad Safiih Lola
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13. Miss Haszailianawaty Mat Razali
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14. Mrs. Wan Fatin Fatihah Yahya
VOCATIONAL TRAINING OFFICER

Academician
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PhD (UMT), MIT, BIT (Hons) (UKM), Dip.IT (KUSZA)
Information Retrieval, Information System

PROFESSOR

DEAN

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Software Engineering and Management, Software Quality, ICT Strategic Planning, e-Community

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PhD (Manchester), MSc, BSc (UPM)
Decision Support System, Information System

Academician
Computer Science Programme

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PhD (UKM), MSc, BSc (UTM)
Decision Support System, Ontology Modelling, Knowledge Engineering

Assoc. Prof. Ts. Dr. Noraida Haji Ali
PhD, MIT, BSc (Hons) (UKM)
Software Engineering, Formal Modelling, Algorithm & Data, e-Learning

Assoc. Prof. Ts. Dr. Masita @ Masila Abdul Jalil
PhD (UKM), MSc, BEng (Hons) (Warwick)
Information Science, Software Engineering

Assoc. Prof. Ts. Dr. Mustafa Man
PhD (UTM), MSc, BSc (UPM)
Database, Internet of Things (IOT), Image Processing, Data Mining

Assoc. Prof. Ts. Dr. Ahmad Shukri Mohd Noor
PhD (UTHM), MSc (KUSTEM), BSc (Conventry)
Distributed Computing, Internet of Things (IoT)

Assoc. Prof. Dr. Engku Fadzli Hasan Syed Abdullah
PhD (Cardiff University), MSc (UTM), BMIS (UIAM)
Software Engineering, Intelligent System, Embedded Programming, Internet of Things (IoT)

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PhD (Bristol) UK, MSc (UM), BSc (UKM)
Artificial Intelligence, Semantic Web, Natural Language Processing, Machine Learning

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PhD (UTS, Sydney), MSc (USM), BIT (UUM)
Software Reliability & Testing, Software Metrics & Measurement, Software Engineering

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PhD (UMT), MIT, BIT (Hons) (UKM), Dip.IT (KUSZA)
Decision Support System, Multimedia

Dr. Mohamad Nor Hassan
PhD (UMT), MSc (UiTM), BSc (Liverpool)
Information System

Dr. Rabiei Mamat
PhD (UTHM), MSc (KUSTEM), BSc (UPM)
Cluster Computing, Machine Learning

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PhD (UTM), B. Eng (Telecommunication) (UTM),
Dip. Eng (Communication) (UTM)
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PhD (Stirling, Scotland), MSc (UiTM), BSc (KUSZA)
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Dr. Abdul Aziz K Abdul Hamid
PhD, MIT, BSc (Hons) (UKM)
Software Engineering, Image Processing

Academician
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Ts. Dr. Ily Amalina Ahmad Sabri
PhD, MSc, BIT (UMT), Dip.IT (PSMZA)
Decision Support System and Data Mining

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PhD, MSc, BSc (UTM)
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Dr. Rosaida Rosly
PhD, MSc, BSc, Dip.IT (UniSZA)
Data Classification, Machine Learning, Deep Learning

Ts. Mohammad Aizat Basir
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MSc, BSc (USM)
Information Security

Academician
Computer Science Programme

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PhD (UM), MSc, BSc (UTM)
Software Engineering, Bioinformatics and Artificial Intelligence

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Bio-inspired Computation, Industrial Robots, Manufacturing Systems, Industrial Computing

Dr. Hasnah Nawang
PhD, MSc (UniSZA), BSc (UPM), Dip Ed (UPSI)
Dip Sc (UC Bestari)
Machine Learning, Ensemble Methods, Software Engineering

Dr. Che Akmal Che Yahaya
MSc (UiTM), BSc (Hons) (UTHM)
Cloud Computing, Artificial Intelligence, Intrusion Detection System

Dr. Nurul Nazihah Jamal
PhD, MPhil, BSc (UTM)
Artificial Intelligence,Machine Learning, Data/Learning Analytics, Computing Education

Dr. Firdaus Afifi Md Isa
PhD, MCompSc, BCompSc (UM)
Cybersecurity, Computer Network, Artificial Intelligence, IoT

Mr. Mohd Arizal Shamsil Mat Rifin
MSc, BIT (UMT)
Software Engineering

Academician
Computer Science Programme

LECTURER

Mr. Muhammad Shamel Mohamad
MSc (GCU), BSc (Hons) (KUPTM)
Cyber Security, Network, Cloud Computing

Mr. Muhammad Syaffiq Hazari bin Zulkefli
MSc, BSc (Hons) (UUM)
System Analysis & Design, Information System, Web Application Development

Miss Siti NurFarahim Shaharudin
MSc, BSc (Hons) (UMT)
Artificial Intelligence, Deep Learning, Image Processing

INTERNATIONAL LECTURER

Dr. Waheed Ali Hussein Mohammed Ghanem
PhD, MSc (USM), BSc (AU)
Network Security, Artificial Intelligence, Machine Learning, Swarm Intelligent, Optimization Algorithm

Dr. Wiwied Virgiyanti
PhD (USM), MSc IT (Management) (UTM), B.Eng (Informatics) (Gunadarma University)
Knowledge Management, Project Management, Information Systems, Organizational Behaviour

Dr. Muqaddas Abid
PhD (UMT), MSc, BSc (Hons) (COMSATS Institute of Information Technology)
Image and Signal Processing, Computer Vision, Machine and Deep Learning

Academician
Computer Science Programme

VOCATIONAL TRAINING OFFICER

Mrs. Wan Fatin Fatihah Yahya
MSc, BIT (UMT)
Software Engineering

Academician
Mathematical Science Programme

HEAD OF PROGRAMME BACHELOR OF SCIENCE (DATA ANALYTICS)

Prof. Dr. Muhamad Safiih Lola
PhD (USM), MSc (UPM), BEc Hons (UUM)
Applied Statistics (Robust Statistics, Econometrics, Hybrid Statistics), Data Analytics (Forecasting Analysis)

HEAD OF PROGRAMME BACHELOR OF SCIENCE (APPLIED MATHEMATICS)

Assoc. Prof. Dr. Shalela Mohd Mahali
PhD (Western Australia), MSc (UTM), BSc (KUSTEM)
Mathematical Modelling

HEAD OF PROGRAMME BACHELOR OF SCIENCE (FINANCIAL MATHEMATICS)

Assoc. Prof. Dr. Binyamin Yusoff
PhD (Barcelona), MSc, BSc (UMT)
Fuzzy Sets, Decision Analysis

CHAIR OF MATHEMATICS

Dr. Fatimah Noor Harun
PhD (Wollongong), MSc, BApp. Sc (USM)
Mathematical Modelling, Differential Equations

PROFESSOR

Prof. Dr. Mohd Lazim Abdullah
PhD (UMT), BSc Ed (Hons) (Malaya)
Fuzzy Sets, Social Statistics, Decision Science

Prof. Dr. Zabidin Salleh
PhD (UPM), MSc (USM), BSc (Hons), Dip Ed (UM)
Topology, Functional Analysis, Dynamical System

Prof. Dr. Roslan Hasni @ Abdullah
PhD (UPM), MSc (UKM), BSc (USM)
Graph Theory, Combinatorics

Academician
Mathematical Science Programme

LECTURER

Assoc. Prof. Dr. Norizan Mohamed
PhD (UTM), MSc, BSc (UKM)
Statistical Quality Control, Statistical Forecasting

Assoc. Prof. Dr. Che Mohd Imran Che Taib
PhD (UiO, Norway), MSc, BSc (KUSTEM)
Financial Mathematics, Finance and Insurance

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PhD, MSc, BSc (UKM)
Fluid Dynamics

Assoc. Prof. Dr. Auni Aslah Mat Daud
PhD (Western Australia), BSc (UTM)
Mathematical modeling, Dynamical system, Chaos theory, Mathematical epidemiology

Assoc. Prof. Ts. Dr. Nur Aidya Hanum Aizam
PhD (Curtin), Msc (UKM), BSc (KUSTEM)
Operations Research

Assoc. Prof. Dr. Ahmad Termimi Ab Ghani
DSc (Tohoku University), MSc (UMT), BSc (KUSTEM)
Foundation of Mathematics (Logic of Games, Fuzzy Set Theory and its Variations, Algebra and Combinatorics)

Assoc. Prof. Dr. Mohamad Nazri Husin
PhD (UMT), MSc, Bsc (Hons) (USM)
Pure Mathematics and Graph Theory

Academician
Mathematical Science Programme

LECTURER

Assoc. Prof. Dr. Syerrina Zakaria
PhD (USM), MSc, BSc (UKM)
Applied Statistics

DEPUTY DEAN (TALENT & RESEARCH)

Dr. Ilyani Abdullah
PhD (UTM), MSc, BSc (UKM)
Fluid Dynamics, Differential Equations

Dr. Hanafi A. Rahim
PhD (UiTM), MSc (UKM), BSc (UiTM)
Applied Statistics

Dr. Nur Baini Ismail
PhD (Bradford), MSc, BSc (USM)
Computer Aided Geometry Design

Dr. Azwani Alias
PhD (Loughborough), MSc, BSc (UTM)
Linear and Non-Linear Waves

Dr. Loy Kak Choon
PhD (Uni. Ottawa), MSc (USM), BSc (KUSTEM)
Numerical Methods for Differential Equations

Dr. Hassilah Salleh
PhD (UiO, Norway), MSc (UKM), BSc (KUSTEM)
Stochastic Analysis, Financial Mathematics

Academician
Mathematical Science Programme

LECTURER

Dr. Ummu 'Atiqah Mohd Roslan
PhD (Exeter), MSc, BSc (UMT)
Dynamical System

Ts. Dr. Mohamed Saifullah Hussin
PhD (ULB, Brussels), MSc, BSc (UUM)
Metaheuristics, Simulated Annealing, Tabu Search

Dr. Chong Nyuk Sian
PhD (Uni. Ottawa), MSc (USM), BSc (Hons) (USM)
Mathematical Modeling of Epidemiology

Dr. Nur Fadhilah Ibrahim
PhD (Curtin), MSc, BSc (UTM)
Operations Research and Optimization

Dr. Hanani Farhah Harun
PhD, MSc, BSc (Hons) (UIAM)
Financial Derivatives (Option Pricing), Islamic Finance

Dr. Sharifah Sakinah Syed Abd Mutalib
PhD (UMP), Msc (UKM), BSc (Hons) (UKM)
Multivariate Data, Outlier Detection, Applied Statistics

Dr. Wan Nuraini Fahana Wan Nasir
PhD (UMT), MSc (UPM), BSc (Hons) (USM)
Multivariate Data, Statistics, PLS-SEM

Academician
Mathematical Science Programme

LECTURER

Dr. Mukminah Darus
PhD, Msc, BSc (UMT),
Stochastic Modelling and Financial Mathematics

Mrs. Nor Azlida Aleng@Mohamad
MSc, BSc (UKM)
Biostatistics and Management Mathematics

Mrs. Siti Madhihah Abdul Malik
MSc (UKM), BSc (KUSTEM)
Time Series Forecasting

Dr. Muhammad Hilmi Abdul Majid
Ph.D (UKM), MSc (UM), BSc (University of Auckland)
Statistical Modeling, Applied Statistics

INTERNATIONAL LECTURER

Dr. Maharani Abu Bakar
PhD (Essex), MSc, BSc (UGM, Indonesia)
Numerical Analysis, Artificial Neural Networks, Machine Learning

SECTION B

General Information, Rule for Student Dress Code and Appearance

General Information

1) Studying System

UMT practices a semester-based system. There are three common semesters for each academic year, with the duration for the first and second semester are 18 weeks, and 9 weeks for the short semester. The breakdown is as follows:

Activity	Semester I	Semester II	Short Semester
Lecture	7 Weeks	7 Weeks	8 Weeks
Mid-semester Break	1 Weeks	1 Weeks	-
Lecture	7 Weeks	7 Weeks	-
Revision Break	1 Weeks	1 Weeks	-
Final Examination	2 Weeks	2 Weeks	1 Weeks

2) Programme Curriculum Structure

The curriculum structure for postgraduates is formed based on the philosophy and goal of UMT which is to produce knowledgeable, authoritative graduates with various skills for universal well-being. There are three course components in the programme curriculum, namely Programme Core, Elective Programme and Project.

- **Programme Core**
  The Programme Core component consists of related programme courses with a field of specialization and determined by the conducting faculty the programme. Students in the relevant programme are required to take courses in this component.

- **Elective Programme**
  The Elective Component of the Programme consists of optional courses that can be taken by the student, after discussion and with the permission of the mentor/head of programme/dean. The credit hours for elective courses are counted and the score point is given.

- **Project**
  The Project component consists of Project courses that involve planning, implementation, and presentation of results/research projects. Students in the relevant programme are required to take courses in this component.

3) Grading System, Grades and Grade Points

The Grading Scheme, Alphabetical Grade, Grade Value Points and Grade Description are as per the following table:

Marks	Alphabet Grade	Grade Point Value	Grade Description
80 – 100	A	4.00	Excellent
75 - 79	A-	3.75	
70 - 74	B+	3.50	Good
65 - 69	B	3.00	
60 - 64	B-	2.75	Satisfactory
55 - 59	C+	2.50	Pass
50 - 54	C	2.00	Fail
45 - 49	C-	1.75	
40 - 44	D	1.00	
0 - 39	F	0.00	

4) Academic Standing

Students will be given the academic standing in every semester based on the following status:

Standing	Description
Passed (L)	Achieved a minimum CGPA of 3.00 and passed all courses.
Repeat (LMK)	Achieved a minimum CGPA of 3.00 and failed any of the courses.
Probation (P)	Achieved a CGPA between 2.99 and 2.50 and failed any of the courses.
Failed and Dismissed (GB)	Obtained a CGPA below 2.50 in any one semester; or Failed to attain the required minimum CGPA of 3.00 in the semester following the one in which he/she was placed on probation.
Deferment (TG)	Student whose application for deferment has been granted.
Graduated (IJZ)	Fulfilled all requirements as specified by the programme.

Achieved a CGPA between 2.99 and 2.50

The passing grade for all courses is C+. Students may be dropped from studies in the following circumstances:

i) Obtain a CGPA below 2.50 in one of the semesters
ii) For students on probation, failing to obtain a minimum CGPA of 3.00 in the current semester.

Rules for Student Dress Code and Appearance

1) Dress Code Introduction

This rule is based on Rule 3(a) and Rule 26, Universiti Malaysia Terengganu Rules (Student Discipline) 2009. It aims to inform students about the UMT dress code.

2) General Rules of UMT

i) It is mandatory for all students to show their matric card while on campus.
ii) All students are prohibited from wearing clothing or accessories that signify certain groups or associations that might cause disharmony on campus.
iii) All students are prohibited from showcasing any elements that might contradict ethics and morals or wearing any attire that might contain designs of words or phrases that are not parallel with good norms or values.
iv) All students are restricted with dress code rules as specified by laboratory guidelines or any other place on campus with its own specified guidelines.

3) Dress Code in the Residential College Area & Attending Official Programmes/Events

- **General Dress Code**
  i) Every student must dress appropriately as a university student by showing **neatness** and **politeness**.
  ii) Students are not allowed to wear tight or sparse clothing, expose the body (any part from the chest to the knees), or dress conspicuously. Students are prohibited from dressing as below when attending lectures or any official event:
    a) Skirt above knee level
    b) Wearing jeans
    c) Flip-flops
    d) Tight pants/skirts
    e) Sleeveless dress/ shirt
    f) T-shirt without sleeve collar

    Note: The above list is not final and is subject to the university's current regulations.

iii) Due to safety factors, face covering (purdah/niqab) while in the residential college area or at official events is prohibited.
iv) Students are prohibited from displaying tattoos on any part of the body.
v) Piercing and wearing jewellery for men is strictly prohibited, and excessive piercing is also prohibited for female students.

Examples of Dress Code for Male and Female Students

- **Official Programmes/Events**
  i) Students are required to dress appropriately, when dealing with the Residence College Office or any official event;
     a) Shirts, collared T-shirts, corporate shirts, batik shirts;
     b) Wearing shoes;
     c) Loose trousers;
     d) Long skirt below the knee;
     e) Wearing a traditional Malay dress or wearing decent clothes by wearing a shirt past the butt level.

  ii) Students are also not allowed to wear **hats** or **bandanas** when doing official matters at the university office or in the lecture hall.

- **Sports Attire**
  i) Students must dress in accordance with the chosen sportswear code.
  ii) Students are prohibited from dressing as listed below when in the residential college area, generally multi-purpose courts A and B.
     a) Leggings without additional pants;
     b) Short pants above the knee without tight-fit pants;
     c) Flip flops.

4) Hair Style

i) Students should always have neat and tidy hair.

ii) Male students are not allowed to keep long hair and tails in front or back. Hair should not reach the shirt collar.

iii) Exaggerated hair fashion for men (partial patterned hairstyles/*qaza'*) and women is prohibited.

iv) Hair colouring is strictly prohibited.

SECTION C

Academic Programme Offering

Master of Computer Science

Introduction

The aim of the programme is to prepare professional graduates to highlight the potential in the field of Computer Science, spurring and encouraging the exploration of advanced and innovative sciences in educational and research development. Students enrolling in this programme are required to fulfil forty (40) credits consisting of course work, and dissertation. The dissertation is submitted at the end of the programme. In some programmes, a thorough examination is required.

Programme Education Objective (PEO)

At the end of their studies, students who attend this programme have the ability to achieve the following objectives:

PEO1	:	An expert in the field of Computer Science with advanced knowledge and strong critical thinking skills to solve computing problems across multiple disciplines.
PEO2	:	An expert in the field of Computer Science who are able to explore entrepreneurial and business opportunities involving computing technologies, work professionally and ethically, and practise lifelong learning.
PEO3	:	An expert in the field of Computer Science who can communicate effectively, is sensitive to social issues and responsibilities, and is able to work independently or as part of a team.
PEO4	:	An expert in the field of Computer Science who possesses strong digital and numeracy skills and is prepared to take on leadership roles, applying advanced Computer Science knowledge across diverse disciplines.

CURRICULUM
MASTER OF COMPUTER SCIENCE

Number of Credits for Graduating
The minimum number of credits to graduate is 40 credit hours. The division of credit hours according to course categories is as follows:

Category	Credit Hour
Programme Core Courses	19
Programme Elective Courses	12
Project	9
Total	**40**

Programme Core Courses
Students need to take all **FIVE** Programme Core courses that have been set which all amount to 19 credit hours.

No.	Course Code	Course Name	Credit Hour	Prerequisite
1.	CSM5003	Research Methodology	3(3+0)	No
2.	CSS5024	Analysis of Algorithms	4(4+0)	No
3.	CSS5044	Machine Learning	4(4+0)	No
4.	CSS5054	Advanced Data Analytics	4(4+0)	No
5.	CSS5064	Software Project Management Technology	4(4+0)	No

Programme Elective Courses
To meet the graduation requirements, students are required to choose **THREE** elective courses from the list of elective courses offered below and must pass all programme elective courses totalling 12 credit hours.

No.	Course Code	Course Name	Credit Hour	Prerequisite
1.	CSS5414	Software Testing Methodology	4(4+0)	No
2.	CSS5424	Software Quality Management	4(4+0)	No
3.	CSS5434	Decision Support System	4(4+0)	No
4.	CSS5444	Advanced Digital Image Processing	4(4+0)	No

Project
Students are required to complete project, academic report and make presentation in oral exam and are required to pass the Master Project course totalling 9 credit hours.

No.	Course Code	Course Name	Credit	Prerequisites
1.	CSS5999	Master Project	9(0+9)	No

FULL-TIME COURSE SCHEME
MASTER OF COMPUTER SCIENCE

CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE	CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE
YEAR 1							
SEMESTER 1				**SHORT SEMESTER**			
CSM5003	Research Methodology	3(3+0)	-	CSS5044	Machine Learning	4(4+0)	-
CSS5064	Software Project Management Technology	4(4+0)	-		Elective 2	4(4+0)	-
CSS5054	Advanced Data Analytics	4(4+0)	-				
	Elective 1	4(4+0)	-				
TOTAL		**15**		**TOTAL**		**8**	
SEMESTER 2							
CSS5024	Analysis of Algorithms	4(4+0)	-				
CSS5999	Master Project	9(0+9)	-				
	Elective 3	4(4+0)	-				
TOTAL		**17**					
CREDIT TOTAL							**40**

PART-TIME COURSE SCHEME
MASTER OF COMPUTER SCIENCE

CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE	CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE
YEAR 1							
SEMESTER 1				**SHORT SEMESTER**			
CSS5064	Software Project Management Technology	4(4+0)	-	CSS5044	Machine Learning	4(4+0)	-
CSS5054	Advanced Data Analytics	4(4+0)	-				
TOTAL		**8**		**TOTAL**		**4**	
SEMESTER 2							
CSS5024	Analysis of Algorithms	4(4+0)	-				
	Elective 1	4(4+0)	-				
TOTAL		**8**					
ACCUMULATED CREDIT YEAR 1							**20**
YEAR 2							
SEMESTER 3				**SHORT SEMESTER**			
CSM5003	Research Methodology	3(3+0)	-		Elective 3	4(4+0)	-
	Elective 2	4(4+0)	-				
TOTAL		**7**		**TOTAL**		**4**	
SEMESTER 4							
CSS5999	Master Project	9(0+9)	-				
JUMLAH		**9**					
ACCUMULATED CREDIT YEAR 2							**20**
TOTAL ACCUMULATED CREDIT							**40**

Note:
Students are required to choose **THREE** elective courses from the list of elective courses offered below:

Code	Course Name	Credit Hour
CSS5414	Software Testing Methodology	4(4+0)
CSS5424	Software Quality Management	4(4+0)
CSS5434	Decision Support System	4(4+0)
CSS5444	Advanced Digital Image Processing	4(4+0)

COURSE SYNOPSIS
MASTER OF COMPUTER SCIENCE

PROGRAMME CORE COURSES

CSM5003 Research Methodology
Credit 3 (3+0)
Prerequisite Nil

This course equips students with the skills to study and conduct proper research. Students develop skills to recognize and reflect on the strengths and limitations of different research methodologies, understand the connections between theory and practice, evaluate research critically, and address ethical and practical issues. This course takes a step-by-step approach to the design and implementation of research techniques. How to manage and analyze data (including computer-assisted), and how to write and present findings are core components of this course.

CSS5024 Analysis of Algorithms
Credit 4 (4+0)
Prerequisite Nil

This course introduces students to the techniques of how to measure the effectiveness of a computer algorithm. At the beginning of the course, students will be introduced to knowledge of functions, relational relations, and some notations including asymptotic notation, real-value functions and logarithms. Students will then be exposed to applications that use these notations to analyze an algorithm.

CSS5044 Machine Learning
Credit 4 (4+0)
Prerequisite Nil

This course introduces the foundational concepts and modern techniques in Machine Learning (ML). Students will explore various learning paradigms including supervised, unsupervised, and reinforcement learning, with a focus on probabilistic reasoning, neural networks, deep learning architectures, ensemble methods, and bio-inspired algorithms. Special emphasis is given to developing practical skills in implementing machine learning models, selecting appropriate algorithms, evaluating model performance, and understanding explainable AI. Students will also engage in collaborative problem-solving projects to apply ML techniques to real-world datasets, incorporating statistical reasoning and numeracy to make data-driven decisions.

CSS5054 Advanced Data Analytics
Credit 4 (4+0)
Prerequisite Nil

This course introduces students to the fundamental concepts, tools, and techniques necessary for extracting insights and knowledge from data. Covering the entire data science lifecycle, students will learn about data collection, cleaning, analysis, visualization, programming languages, machine learning, and effective data communication to solve real-world problems.

CSS5064 Software Project Management Technology
Credit 4 (4+0)
Prerequisite Nil

This course will enable students to gain advanced knowledge about software project management

technology. This will help increase the students' knowledge in the areas related to practices in managing software project. Emphasis is given to the application of current technology in the management processes. Element of human factor will also be addressed to strengthen students' leadership skills in managing software project.

PROGRAMME ELECTIVE COURSES

CSS5414 Software Testing Methodology
Credit 4 (4+0)
Prerequisite Nil

This course exposes students to master the methods of software testing for testing software and assuring its quality. Students will learn how to test software based on international board's procedures such as the International Software Testing Qualifications Board (ISTQB). In the life cycle testing software, students will learn a range of methods. Static and dynamic testing involves specific methods. Students will also learn how to handle the test results ' procedures and flaws. A workshop will be held at the end of the course where students will use case studies in the chosen application domain to perform testing.

CSS5424 Software Quality Management
Credit 4 (4+0)
Prerequisite Nil

This course examines main techniques and tools use for monitoring, controlling and improving the quality of software. In applying world-class quality improvement, students are exposed to innovations in quality management, basic instruments for enhancing quality and strategic management. Emphasization also being applied on analyzing the control chart and surveys of process capabilities.

CSS5434 Decision Support System
Credit 4 (4+0)
Prerequisite Nil

This course covers the concept of Decision Support System (DSS) from a management perspective that includes integration of Internet functions. In emphasizing management applications, it discusses the implications of DSS technology in management, the role of DSS in enhancing creativity and problem solving, the use of intelligent agent software and commercial data mining. The course also covers the various support systems, user categories, problems and technologies used and illustrates how these concepts and principles apply to a specific system.

CSS5444 Advanced Digital Image Processing
Credit 4 (4+0)
Prerequisite Nil

This course introduces students to the basic concepts, methodologies and algorithms of digital image processing. Among the topics discussed are fundamentals of digital image processing, image enhancement in spatial and frequency domains, image restoration, image compression and morphological image processing. The main goal of this course is to lay a solid foundation for students to study advanced image analysis topics such as computer vision systems, image analysis in various domains including marine as well as image processing and retrieval.

PROJECT

CSS5999	**Master Project**
Credit	**9 (0+9)**
Prerequisite	**Nil**

This course enables students to expand their knowledge, understanding and skills that are required to solve problem in related field using scientific way. This includes planning, executing and presenting significant research output/project. The scope and difficulty of the project should be commensurate with the capstone of the master's degree and should obtain the consent of project supervisor and assessment committee.

Master of Information Technology

Introduction

This programme aims to provide graduates with academic education and career-oriented skills to meet the needs of industry, research and education, provide graduates who can apply management and technical expertise from various fields, especially in the field of Information Technology, provide areas of focus consistent with the university's vision and mission which is growing rapidly and will provide services, consulting and training in the field of Information Technology. Students enrolled in this programme are required to complete forty (40) credits consisting of coursework, and dissertation. A dissertation is submitted at the end of the programme. In some programmes, a comprehensive exam is required.

Programme Education Objective (PEO)

At the end of their studies, students who attend this programme have the ability to achieve the following objectives:

PEO1	:	An expert in the field of Information Technology with advanced knowledge and critical thinking skills and apply enhanced technical and numeracy skills to meet the needs of both universities and industry.
PEO2	:	An expert in the field of Information Technology with effective communication and interpersonal skills to engage with stakeholders, and capable of working responsibly as an individual or in a team.
PEO3	:	An expert in the field of Information Technology who is able to apply theory to real-world problem solving, skilled in presenting information through meaningful visualisations, and adheres to ethical conduct and professional practice in carrying out assigned duties.
PEO4	:	An expert in the field of Information Technology who are committed to lifelong learning, possesses an entrepreneurial mindset, and demonstrates effective leadership.

CURRICULUM
MASTER OF INFORMATION TECHNOLOGY

Number of Credits for Graduating
The minimum number of credits to graduate is 40 credit hours. The division of credit hours according to course categories is as follows:

Category	Credit Hour
Programme Core Courses	19
Programme Elective Courses	12
Project	9
Total	**40**

Programme Core Courses
Students need to take all **FIVE** Programme Core courses that have been set which all amount to 19 credit hours.

No.	Course Code	Course Name	Credit Hour	Prerequisite
1.	CSM5003	Research Methodology	3(3+0)	No
2.	CSS5064	Software Project Management Technology	4(4+0)	No
3.	ITS5024	Open Source Programming	4(4+0)	No
4.	ITS5034	Data Analytics	4(4+0)	No
5.	ITS5054	Strategic Information System Planning	4(4+0)	No

Programme Elective Courses
To meet the graduation requirements, students are required to choose **THREE** elective courses from the list of elective courses offered below and must pass all programme elective courses totalling 12 credit hours.

No.	Course Code	Course Name	Credit Hour	Prerequisite
1.	CSS5414	Software Testing Methodology	4(4+0)	No
2.	CSS5424	Software Quality Management	4(4+0)	No
3.	CSS5434	Decision Support System	4(4+0)	No
4.	ITS5414	Digital Commerce	4(4+0)	No

Project
Students are required to complete projects, academic reports and make presentations in oral exams and are required to pass the Project course totalling 9 credit hours.

No.	Course Code	Course Name	Credit Hour	Prerequisite
1.	CSS5999	Master Project	9(0+9)	No

FULL-TIME COURSE SCHEME
MASTER OF INFORMATION TECHNOLOGY

CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE	CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE
YEAR 1							
SEMESTER 1				**SHORT SEMESTER**			
CSM5003	Research Methodology	3(3+0)	-	ITS5034	Data Analytics	4(4+0)	-
CSS5064	Software Management and Development Technology	4(4+0)	-		Elective 2	4(4+0)	-
ITS5024	Open Source Programming	4(4+0)	-				
	Elective 1	4(4+0)	-				
TOTAL		**15**		**TOTAL**		**8**	
SEMESTER 2							
ITS5054	Strategic Information System Planning	4(4+0)	-				
CSS5999	Master Project	9(0+9)	-				
	Elective 3	4(4+0)	-				
TOTAL		**17**					
CREDIT TOTAL							**40**

PART-TIME COURSE SCHEME
MASTER OF COMPUTER SCIENCE

CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE	CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE
YEAR 1							
SEMESTER 1				**SHORT SEMESTER**			
CSS5064	Software Management and Development Technology	4(4+0)	-	ITS5034	Data Analytics	4(4+0)	-
ITS5024	Open Source Programming	4(4+0)	-				
TOTAL		**8**		**TOTAL**		**4**	
SEMESTER 2							
ITS5054	Strategic Information System Planning	4(4+0)	-				
	Elective 1	4(4+0)	-				
TOTAL		**8**					
ACCUMULATED CREDIT YEAR 1							**20**
YEAR 2							
SEMESTER 3				**SHORT SEMESTER**			
CSM5003	Research Methodology	3(3+0)	-		Elective 3	4(0+4)	-
	Elective 2	4(4+0)	-				
TOTAL		**7**		**TOTAL**		**4**	
SEMESTER 4							
CSS5999	Master Project	9(0+9)	-				
TOTAL		**9**					
ACCUMULATED CREDIT YEAR 2							**20**
TOTAL ACCUMULATED CREDIT							**40**

Note:
Students are required to choose **THREE** elective courses from the list of elective courses offered below:

Code	Course Name	Credit Hour
CSS5414	Software Testing Methodology	4(4+0)
CSS5424	Software Quality Management	4(4+0)
CSS5434	Decision Support System	4(4+0)
ITS5414	Digital Commerce	4(4+0)

COURSE SYNOPSIS
MASTER OF INFORMATION TECHNOLOGY

PROGRAMME CORE COURSES

CSM5003 Research Methodology
Credit 3 (3+0)
Prerequisite Nil

This course equips students with the skills to study and conduct proper research. Students develop skills to recognize and reflect on the strengths and limitations of different research methodologies, understand the connections between theory and practice, evaluate research critically, and address ethical and practical issues. This course takes a step-by-step approach to the design and implementation of research techniques. How to manage and analyze data (including computer-assisted), and how to write and present findings are core components of this course.

CSS5064 Software Project Management Technology
Credit 4 (4+0)
Prerequisite Nil

This course will enable students to gain advanced knowledge about software project management technology. This will help increase the students' knowledge in the areas related to practices in managing software project. Emphasis is given to the application of current technology in the management processes. Element of human factor will also be addressed to strengthen students' leadership skills in managing software project.

ITS5024 Open Source Programming
Credit 4 (4+0)
Prerequisite Nil

This course introduces the fundamentals of open-source programming, focusing on practical skills using tools like Git, Hadoop, and Rhomobile Rhodes. Students will learn HTML5 and PHP for web development, and how to integrate PHP with MySQL for database-driven applications. Key topics include open-source history, licensing, and project management. Emphasis is placed on hands-on activities, in-class exercises, and a final project where students develop and present an open-source application. By the end of the course, students will gain essential knowledge and experience to participate in open-source software development within real-world IT environments.

ITS5034 Data Analytics
Credit 4 (4+0)
Prerequisite Nil

This course covers core concepts and methods in data analysis, including exploring, modeling, and interpreting information. It emphasizes data manipulation and visualization skills using popular data analytics tools to prepare, transform, and present data effectively. Students will develop a solid understanding of basic data modeling and statistical concepts to support meaningful analysis. Additionally, the course addresses current issues in data analytics such as data privacy, ethical considerations, and challenges posed by big data and data governance. Through practical exercises and case studies, learners gain the skills needed to tackle real-world problems and make data-driven decisions responsibly.

ITS5054 Strategic Information Systems Planning
Credit 4 (4+0)
Prerequisite Nil

This course is designed to apply strategic planning management skills in information systems. It offers courses that integrate management and computer science with a focus on current issues within an organization. The emphasis is on contributing to society and at the same time creating healthy competition with the outside world.

PROGRAMME ELECTIVE COURSES

CSS5414 Software Testing Methodology
Credit 4 (4+0)
Prerequisite Nil

This course exposes students to master the methods of software testing for testing software and assuring its quality. Students will learn how to test software based on international board's procedures such as the International Software Testing Qualifications Board (ISTQB). In the life cycle testing software, students will learn a range of methods. Static and dynamic testing involves specific methods. Students will also learn how to handle the test results ' procedures and flaws. A workshop will be held at the end of the course where students will use case studies in the chosen application domain to perform testing.

CSS5424 Software Quality Management
Credit 4 (4+0)
Prerequisite Nil

This course examines main techniques and tools use for monitoring, controlling and improving the quality of software. In applying world-class quality improvement, students are exposed to innovations in quality management, basic instruments for enhancing quality and strategic management. Emphasization also being applied on analyzing the control chart and surveys of process capabilities.

CSS5434 Decision Support System
Credit 4 (4+0)
Prerequisite Nil

This course covers the concept of Decision Support System (DSS) from a management perspective that includes integration of Internet functions. In emphasizing management applications, it discusses the implications of DSS technology in management, the role of DSS in enhancing creativity and problem solving, the use of intelligent agent software and commercial data mining. The course also covers the various support systems, user categories, problems and technologies used and illustrates how these concepts and principles apply to a specific system.

ITS5414 Digital Commerce
Credit 4 (4+0)
Prerequisite Nil

This course reviews digital marketing strategies, implementation and considerations for B2B and B2C brands and provides a detailed understanding of all digital channels and platforms. Students will complete the course with compreehensive knowledge and experience upon the methods to develop an integrated digital marketing strategy, from formulation to implementation.

PROJECT

CSS5999	**Master Project**
Credit	**9 (0+9)**
Prerequisite	**Nil**

This course enables students to expand their knowledge, understanding and skills that are required to solve problem in related field using scientific way. This includes planning, executing and presenting significant research output/project. The scope and difficulty of the project should be commensurate with the capstone of the master's degree and should obtain the consent of project supervisor and assessment committee.

Master of Mathematics

Introduction

Understanding complex phenomena in real-world problems requires knowledge and skills at an advanced level. Modelling complex dynamic systems and dealing with unpredictable processes must be based on a combination of pure and applied mathematics. To some extent, some problems may require solving with the help of Machine Learning in parallel with the industrial revolution nowadays. This programme has been designed to equip you with the knowledge and skills you need for your career. Our experts are waiting to serve you!

Programme Education Objective (PEO)

This programme is offered for students to achieve the following objectives:

PEO1	:	Knowledgeable and have a deep understanding in mathematics and eager to explore new and challenging field of knowledge.
PEO2	:	Proficient in using computer technology to solve problems critically and innovatively.
PEO3	:	Able to lead with trust and full of ethics and able to work with team members professionally
PEO4	:	Ability to organize ideas, information, and data on a regular basis and be able to deliver it effectively through the effective use of technology.
PEO5	:	Ability to identify opportunities and the ability to develop a business plan based on knowledge in the field of mathematics.

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CURRICULUM
MASTER OF MATHEMATICS

Number of Credits for Graduating

The minimum number of credits for graduation is 44 credit hours. The distribution of credit hours according to course categories is as follows:

Category	Credit Hour	Percentage
Programme Core Courses	22	50
Programme Elective Courses	12	27
Project	10	23
Total	**44**	**100**

Programme Core Courses (YW)

To meet the graduation requirements, students are required to attend and pass (at least Grade C+) all **SIX** Programme Core (YW) courses totalling 22 credit hours.

No.	Course Code	Course Name	Credit Hour	Prerequisite
1.	CSM5003	Research Methodology	3(3+0)	No
2.	MTS5004	Nonlinear Differential Equations	4(4+0)	No
3.	MTS5014	Numerical Solutions in Mathematical Modelling	4(4+0)	No
4.	MTS5024	Selected Issues in Mathematical Modelling	4(4+0)	No
5.	MTS5114	Machine Learning	4(4+0)	No
6.	CSM5983	Postgraduate Colloquium Project	3(0+3)	No

Programme Elective Courses (ELF)

Students can choose **THREE** courses that amount to 12 credit hours all from any course listed by the school as a course of Programme Elective (ELF).

No.	Course Code	Course Name	Credit Hour	Prerequisite
1.	MTS5034	Mathematics for Physical Oceanography	4(4+0)	No
2.	MTS5044	Computational Wave Dynamics	4(4+0)	No
3.	MTS5054	Stochastic Modelling in Physical Oceanography	4(4+0)	No
4.	MTS5064	Dynamical System for Physical Oceanography	4(4+0)	No
5.	MTS5074	Deterministic Mathematical Model in Maritime Management	4(4+0)	No
6.	MTS5084	Convex and Nonlinear Optimization in Maritime Problems	4(4+0)	No
7.	MTS5094	Fuzzy Decision in Maritime	4(4+0)	No
8.	MTS5104	Metaheuristics for Maritime Decision Making	4(4+0)	No

Project

Students are required to prepare projects, scientific reports and make presentations in oral examinations.

No.	Course Code	Course Name	Credit Hour	Prerequisites
1.	MTS59910	Master Project	10(0+10)	CSM5983

COURSE SCHEME
MASTER OF MATHEMATICS

CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE	CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE
YEAR 1							
SEMESTER 1				**SHORT SEMESTER**			
CSM5003	Research Methodology	3(3+0)	-	CSM5983	Postgraduate Colloquium Project	3(0+3)	-
MTS5004	Nonlinear Differential Equations	4(4+0)	-	MTS5114	Machine Learning	4(4+0)	-
MTS5014	Numerical Solutions in Mathematical Modelling	4(4+0)	-				
MTS5024	Selected Issues in Mathematical Modelling	4(4+0)	-				
	Elective 1	4(4+0)	-				
	TOTAL	**19**			**TOTAL**	**7**	
SEMESTER 2							
MTM3003	Elective 2	4(4+0)	-				
MTM3054	Elective 3	4(4+0)	-				
MTS59910	Master Project	10(0+10)	CSM5983				
	TOTAL	**18**					
						CREDIT TOTAL	**44**

PART-TIME COURSE SCHEME
MASTER OF MATHEMATICS

CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE	CODE	COURSE NAME	CREDIT HOUR	PRE REQUISITE
YEAR 1							
SEMESTER 1				**SHORT SEMESTER**			
MTS5004	Nonlinear Differential Equations	4(4+0)	-	MTS5114	Machine Learning	4(4+0)	-
MTS5014	Numerical Solutions in Mathematical Modelling	4(4+0)	-				
	TOTAL	**8**			**TOTAL**	**4**	
SEMESTER 2							
	Elective 1	4(4+0)	-				
	Elective 2	4(4+0)	-				
	TOTAL	**8**					
						ACCUMULATED CREDIT YEAR 1	**20**
YEAR 2							
SEMESTER 3				**SHORT SEMESTER**			
CSM5003	Research Methodology	3(3+0)	-	CSM5983	Postgraduate Colloquium Project	3(0+3)	-
MTS5024	Selected Issues in Mathematical Modelling	4(4+0)					
	Elective 3	4(4+0)	-				
	TOTAL	**11**			**TOTAL**	**3**	
SEMESTER 4							
MTS59910	Master Project	10(0+10)	CSM5983				
	TOTAL	**10**					
						ACCUMULATED CREDIT YEAR 2	**24**
						TOTAL ACCUMULATED CREDIT	**44**

Note:
Students are required to choose **THREE** elective courses from the list of elective courses offered below:

Course Code	Course Name	Credit Hour
MTS5034	Mathematics for Physical Oceanography	4(4+0)
MTS5044	Computational Wave Dynamics	4(4+0)
MTS5054	Stochastic Modelling in Physical Oceanography	4(4+0)
MTS5064	Dynamical Systems for Physical Oceanography	4(4+0)
MTS5074	Deterministic Mathematical Models in Maritime Management	4(4+0)
MTS5084	Convex and Nonlinear Optimization in Maritime Problems	4(4+0)
MTS5094	Fuzzy Decision in Maritime	4(4+0)
MTS5104	Metaheuristics for Maritime Decision Making	4(4+0)

COURSE SYNOPSIS
MASTER OF MATHEMATICS

PROGRAMME CORE COURSES

CSM5003 Research Methodology
Credit 3 (3+0)
Prerequisite Nil

This course equips students with the skills to study and conduct proper research. Students develop skills to recognize and reflect on the strengths and limitations of different research methodologies, understand the connections between theory and practice, evaluate research critically, and address ethical and practical issues. This course takes a step-by-step approach to the design and implementation of research techniques. How to manage and analyze data (including computer-assisted), and how to write and present findings are core components of this course.

MTS5004 Nonlinear Differential Equations
Credit 4 (4+0)
Prerequisite Nil

This course focuses on the theory and application of nonlinear differential equations, a fundamental area in mathematical modeling. Topics include classification and qualitative behavior of nonlinear systems, stability analysis, autonomous systems, linearization, phase space, and an introduction to chaos theory. Emphasis is placed on analytical methods, critical point classification, and real-world modeling problems. This course supports the development of advanced mathematical reasoning and modeling skills essential for research and applied problem-solving.

MTS5014 Numerical Solutions in Mathematical Modeling
Credit 4 (4+0)
Prerequisite Nil

This course offers a structured introduction to numerical methods in mathematical modeling, beginning with foundational concepts and hands-on programming skills using tools like MATLAB, Python, and Excel. Students explore least-square optimization for parameter estimation, an essential step in validating mathematical models. A significant focus is placed on ordinary differential equations (ODEs), widely used in dynamic system modeling, providing a strong foundation for extending these techniques to partial differential equations (PDEs). Contemporary topics, such as integrating machine learning with ODEs, introduce modern approaches to numerical analysis. The course adopts a study case-based learning approach, where students apply methods to real-world scenarios like drug release modeling and mass transfer, bridging theory and practice. This approach ensures students develop practical problem-solving skills and are well-prepared to tackle complex challenges in numerical modeling.

MTS5024 Selected Issues in Mathematical Modelling
Credit 4 (4+0)
Prerequisite Nil

This course introduces the fundamental concepts and methodologies in mathematical modelling, from model formulation to model validation. It includes techniques such as differential equations, simulation, and data analysis to develop models that describe real-world phenomena. Students will gain hands-on experience using mathematical software such as MATLAB or equivalent tools for both analytical and numerical problem solving. The course culminates in discussions on selected current issues from various applied fields, including maritime applications, presented by guest experts (if applicable). This course

equips students with practical and critical modelling skills relevant to complex, real-world challenges.

MTS5114 Machine Learning
Credit 4 (4+0)
Prerequisite Nil

This course introduces students to the fundamental principles and practical implementation of machine learning algorithms. It covers core models including Bayesian Learning, Neural Networks, Deep Learning, Support Vector Machines, Decision Trees, and Logistic Regression. Emphasis is placed on both theoretical understanding and hands-on application using R and MATLAB. Students will learn to develop, evaluate, and deploy machine learning models in diverse mathematical and statistical contexts. This course is essential for equipping students with modern tools used in research, analytics, and data-driven decision-making across various disciplines.

CSM5983 Postgraduate Colloquium Project
Credit 3 (0+3)
Prerequisite Nil

This course aims to provide a space for students to demonstrate social skills, teamwork and responsibility in organizing postgraduate colloquium ethically, morally and professionally. Each student will be assigned an assignment in a designated workspace to perform and submit a portfolio of assignments for evaluation. In addition, students are required to present their respective master's project proposal papers in the organized colloquium.

PROGRAMME ELECTIVE COURSES

MTS5034 Mathematics for Physical Oceanography
Credit 4 (4+0)
Prerequisite Nil

This course introduces the mathematical foundations and analytical tools essential for understanding physical oceanography. It covers fluid dynamics, wave theory, geophysical equations, and shallow water models used to describe oceanic and atmospheric processes. Students will explore the governing equations of motion, such as Navier–Stokes, Bernoulli's, and rotating frame dynamics, in the context of oceanic phenomena like tides, waves, and wind-driven circulation. Emphasis is placed on applying mathematical reasoning to oceanographic problems to strengthen interdisciplinary knowledge and research capacity in marine science.

MTS5044 Computational Wave Dynamics
Credit 4 (4+0)
Prerequisite Nil

This course introduces computational approaches to understanding wave dynamics through numerical modelling and fluid dynamics simulation. Students will explore governing equations for viscous and multiphase fluids, turbulence models, and key discretisation techniques such as finite difference methods. Emphasis is placed on applying solution procedures like Volume of Fluid (VOF), Constrained Interpolation Profile (CIP), and Lagrangian methods to solve real-world wave problems. This course equips students with essential computational skills to simulate wave phenomena for research and industry applications.

MTS5054 Stochastic Modelling in Physical Oceanography
Credit 4 (4+0)
Prerequisite Nil

The course describes the stochastic method for ocean wave analysis which provides a route to predicting the characteristics of random ocean waves which give vital information for the design and safe operation of ships and sea structures. Begin with a discussion on fundamental knowledge on probability theory, stochastic process and transformation, the course is then describes the essential elements of wind-generated random seas from the stochastic point of view. Next, spectral analysis technique for ocean waves is introduced, probabilistic prediction of wave amplitude and height under various condition is done. Consideration on the wave height, period and travel direction of wind-generated random wave completes the course.

MTS5064 Dynamical System for Physical Oceanography
Credit 4 (4+0)
Prerequisite Nil

This course introduces the application of dynamical systems theory in understanding physical oceanographic phenomena across various spatial and temporal scales. Students will explore foundational equations, vorticity dynamics, and potential vorticity, followed by an in-depth examination of bifurcation theory, periodic orbits, and resonance phenomena. Through numerical techniques and computational methods, students will learn to analyze and simulate dynamic behaviors relevant to ocean circulation and stability. The course bridges theoretical models and real-world applications, empowering students with analytical and computational tools to investigate marine systems dynamically.

MTS5074 Deterministic Mathematical Model in Maritime Management
Credit 4 (4+0)
Prerequisite Nil

This course introduces deterministic mathematical modeling techniques, with a focus on optimization problems relevant to maritime management. Students will learn to formulate, solve, and interpret models such as linear programming, integer programming, and goal programming. Topics include algorithmic methods such as simplex and branch-and-bound, as well as duality and sensitivity analysis. Emphasis is placed on applications to real-world maritime operations and decision-making. By integrating mathematical theory with software-based implementation, the course equips students with problem-solving and analytical skills necessary for sustainable and efficient maritime resource management.

MTS5084 Convex and Nonlinear Optimization in Maritime Problem
Credit 4 (4+0)
Prerequisite Nil

This course introduces the principles and methods of convex and nonlinear optimization. Students will learn key topics such as convex sets, convex functions, equality-constrained optimization, and advanced techniques like Quasi-Newton algorithms. The course also highlights selected applications in maritime fields to demonstrate how optimization methods can be applied in practice.

MTS5094 Fuzzy Decision in Maritime
Credit 4 (4+0)
Prerequisite Nil

This course introduces the fundamental concepts and techniques of fuzzy sets and systems, focusing on their application in maritime decision-making. Students will explore key topics such as fuzzy set theory, membership functions, fuzzy logic, and fuzzy inference systems. Emphasis is placed on decision-making methodologies under uncertainty using tools like Fuzzy AHP, Fuzzy TOPSIS, Fuzzy DEMATEL, and their Type-2 extensions. The course aims to equip students with the knowledge and skills to model complex and ambiguous maritime operational problems and to formulate appropriate

solutions based on fuzzy decision techniques.

MTS5104 Metaheuristics for Maritime Decision Making
Credit 4 (4+0)
Prerequisite Nil

This course explores the fundamentals and applications of metaheuristic algorithms in solving complex combinatorial and optimization problems relevant to maritime decision-making. Topics include computational complexity, search paradigms, and various metaheuristic techniques such as simulated annealing, tabu search, ant colony optimization, and hybrid methods. Students will also learn to evaluate algorithm performance using empirical analysis, particularly runtime distribution. The course emphasizes the practical application of these techniques to real-world maritime challenges such as fleet routing and dock allocation, equipping students with the necessary problem-solving and analytical skills to address operational issues in maritime management.

PROJECT

MTS59910 Master Project
Credit 9 (0+9)
Prerequisite CSM5983

This course provides students with the opportunity to conduct independent research by applying mathematical and statistical knowledge, understanding, and skills to solve real-world problems in a relevant field using a structured scientific approach. The project involves the application of mathematical or statistical methods in problem formulation, model development, data analysis, and interpretation of results. Students are expected to independently plan, manage, and execute a significant project with minimal supervision, following a Heutagogical (self-directed learning) approach. Emphasis is placed on autonomy, research ethics, and academic communication. Each student is required to write, submit, and present a dissertation in accordance with the program's schedule and academic standards. Critical thinking, problem-solving, and communication skills are enhanced through presentation and scientific writing activities.