



In conjunction with The UWI Department of Mathematics The University of the West Indies, Mona

# Master of Science in Enterprise & Risk Management

# Student Handbook

2024 - 2025

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# Introduction

The Master of Science degree in Enterprise Risk Management is offered by **Mona School of Business and Management** (MSBM) in partnership with the Department of Mathematics, UWI, Mona.

This programme is designed to address the demand in the financial services and other industries for modern risk management skills. Risk professionals require a set of integrated skills in risk modeling and management of the risks associated with assets/liabilities of their business operations. The programme is designed to produce graduates with skills in risk techniques and practices who also understand the business contexts and thus are able to address complex risk issues.

The MSc Enterprise Risk Management programme is offered on a part-time basis and consists of 15 credit courses and 3 non-credit foundation courses. The programme runs for 24 months, 6 semesters with 3 courses per semester, (3 evenings per week from 5:30 p.m. to 9:00 p.m.) including summer.

# **Admission Requirements**

Applicants must hold a Bachelor's Degree or equivalent in a related field from a university or college acceptable to the Board for Graduate Studies, The University of the West Indies, with a minimum grade point average (GPA) of 3.0.

Preference will be given to applicants with at least three years relevant work experience.

An application is considered complete when the following documents have been received by the Graduate Studies & Research office:

- Completed application form;
- Application fee;
- Two Referee Reports (academic and professional); and
- Official Transcripts from all colleges/universities attended.

# **Application Procedure**

All applicants are encouraged to apply online early: <u>https://sas.mona.uwi.edu/banndata1-</u> srv mona/uwm adm.p index

#### Interviews

As part of the selection process, MSBM reserves the right to interview applicants for further exploration of their qualifications and experience. You may therefore be called for an interview, possibly at short notice, in order to expedite the process.

#### Acknowledgement

Once your online application has been processed and you are successful, you will receive an offer online, via your e-mail address from the Office of Graduate Studies and Research.

#### **Confirmation of Acceptance**

Applicants who have been offered a place in the programme must confirm their acceptance online by the date specified in the offer. **NB:** If you are offered a place and you are unable to take up the offer, you will be required to defer or reject the offer online.

# Registration

Before the start of the academic year, students are required to register for Semester 1 and Semester 2 for that academic year. Part time students are also required to register for Semester 3.

# **Identification Card**

Once you have registered for your classes, you will be able to obtain your ID card. Your Programme Coordinator will provide the necessary instructions.

The cost for identification card renewal is J\$1,000. The renewal fee is also applicable to students who change their enrollment status. The cost for identification card replacement is J\$1,150.

## **Student Requirements**

- Students should have an active registration status until the completion of their degree. **Students** who are not doing courses in a particular semester must request leave of absence from the Office of Graduate Studies and Research for the inactive period.
- Students **must** submit a request for a third attempt of any graduate course at the Office of Graduate Studies and Research.
- Students who are doing a second sitting of a graduate course must inform the Coordinator in writing indicating their name, identification number, the course code, the name of the course, and the semester in which the course is being done.

# **Attendance Policy**

It is important for students to attend lectures regularly on a timely basis and to work steadily throughout the semester to benefit fully from the programme.

Any student who, having registered for a course and examination, fails to take the examination shall be deemed to have failed the examination. In cases of illness, the candidate shall present to the Office of Graduate Studies and Research, a medical certificate, as proof of illness, signed by the University Health Officer or by any other Medical Practitioner approved for this purpose by the University. The student shall send the medical certificate within seven (7) days from the date of that part of the examination in which the performance of the student is affected.

Students who are encountering difficulties in completing their programme of study should apply for leave of absence. Requests for leave of absence should be sent to the Assistant Registrar, Graduate Studies, and Research, indicating the reason for the request. Approval of a request for leave of absence is not automatic.

## **List of Courses**

Course Code	Course Name	Credits
IT Tools	Computer Business Application	0
MTRM6001	Mathematics for ERM	0
MTRM6002	Statistical Methods	0
SBRM6010	Risk Management in the Business Enterprise	3
SBRM6020	Corporate Finance	3
SBRM6030	Financial Markets	3
MTRM6010	Risk Categorises and Identification	3
MTRM6020	Time Series Analysis	3
MTRM6030	Stochastic Calculus	3
SBRM6040	The Economics of ERM	3
SBRM6050	ERM Governance	
SBRM6060	Ethical, Legal and Regulatory Framework for ERM	3
SBRM6070	ERM in the Global Business Environment	3
SBRM6080	Leading Issues in ERM: Project Based Approach	3
MTRM6040	Quantitative Analysis of Financial Data	3
MTRM6050	Risk Management & Optimization	3
MTRM6060	Credit Risk Management & Modelling	3
MTRM6070	ERM Concept, Framework & Process	3

# **Sequence of Courses**

#### Year 1 (2024/2025)

Semester 1		
Code	Course	Date Scheduled
IT Tools	Computer Application	September - November
MTRM 6001	MATHEMATICS FOR ERM	September - November
MTRM6002	STATISTICAL METHODS	September - November

Semester 2		
Code	Course	Date Scheduled
SBRM6020	CORPORATE FINANCE	January - March
SBRM6010	RISK MANAGEMENT IN THE BUSINESS ENTERPRISE January - Mar	
MTRM6010	RISK CATEGORIZATION & IDENTIFICATION January - Marc	

Course	Date Scheduled April - July
CIAL MARKETS	April - July
TIME SERIES ANALYSIS April - July	
STIC CALCULUS	April - July

#### Year 2 (2024/2025)

Semester 1		
Code	Course	Date Scheduled
SBRM6040	The Economics of Enterprise Risk Management	September - November
SBRM6050	ERM Governance September - Novem	
MTRM6002	Quantitative Analysis of Financial Data September - Novembe	

Semester 2		
Code	Course Date Scheduled	
SBRM6060	CORPORATE FINANCE January - March	
SBRM6070	ERM in the Global Business Environment January - March	
MTRM6050	Risk Management & Optimization January - March	

Summer		
Code	Course Date Scheduled	
MTRM6060	Credit Risk Management & Modeling	April - July
MTRM6070	ERM Concept, Framework & Process April - July	
SBRM6080	Leading Issues in ERM: Project Based Approach	April - July

### **Course Descriptions**

#### MTRM6001: MATHEMATICS FOR ERM

This course is divided into four sections, namely; Sequence & Series, Calculus, Linear Algebra, and Numerical Methods. First, we explore limits and continuity, Taylor series and sequences. Second, we introduce functions of one and several variables, differentiation, integration, partial differentiation, Optimization, and Lagrange multipliers. Third, we solve a system of equations, eigenspace, and quadratic forms. Finally, we look at methods of solving linear and non-linear equations, cholesky decomposition, constrained and unconstrained numerical optimization and finite difference methods.

#### MTRM6002: STATISTICAL METHODS

This course will introduce and examine ways of presenting statistical information graphically and descriptively. Theories relating to probability, distribution and density along with expectation and variation are then explored. We then examine special types of probability, distributions, including normal, lognormal and others. A rigorous appraisal of the determinants of a good estimator then follows. Thereafter, confidence intervals, hypothesis testing and regression analysis are examined. In addition to the theoretical exploration, the statistical package R (or other statistical software) will be used throughout the course to demonstrate the application of these taught concepts in real world scenarios.

#### SBRM6040: THE ECONOMICS OF ENTERPRISE RISK MANAGEMENT

The Economics of Enterprise Risk Management course provides a broader economic framework and context, whereby risks can be identified and interpreted using economic theory and thought applicable to its interpretation. For example, in a global marketplace, the enterprise must be increasingly conscious about how and when changes in demand and supply of commodities and financial flows in world markets will transmit to their own arena and trigger off a cascade of events that puts the enterprise in jeopardy, if no risk mitigation action is taken. Conversely, opportunities emerging in local and foreign markets may be missed and not included in the enterprise's risk management and strategic plans. This course equips the student with the requisite tools of economic analysis to effectively recognize, evaluate, measure, and manage an array of risks within a comprehensive economic and risk management framework. The Economics of Enterprise Risk management course will be pivotal in informing other coursework relative to fundamental analysis of economic activity affecting the business of the enterprise globally

#### MTRM6020: TIME SERIES ANALYSIS

Time series analysis is a specialized branch of statistical science, which deals with such data sets, providing an essential toolset for finance and business analysis, economic forecasting, and decision-making. The course covers the fundamental concepts required for the description, modeling and forecasting of time series data. A particular emphasis is placed on the analysis of real-world data sets from finance and economics, and a practical laboratory component introduces students to the software package R (or other software).

#### MTRM6030: STOCHASTIC CALCULUS

The course aims at providing students with tools required for a rigorous understanding of financial modeling and pricing techniques and therefore provides the mathematical grounding for financial derivatives. Stochastic calculus is a branch of mathematics that operates on stochastic processes. The methods of stochastic calculus have turned out to be most suitable for an adequate description of the evolution of basic (bonds and stocks) and derivatives (forwards, futures, options etc.) securities. The underlying construction of these financial products shall be explored. Additionally, participants will be shown the uses and benefits of stochastic calculus in financial engineering.

#### SBRM6030: FINANCIAL MARKETS

Risk managers must be familiar with the workings of financial markets. They must understand the capabilities provided by the financial sector to mitigate risk. They must also understand the inherent risks facing the financial sector. To do both they must have a good understanding of how financial markets and institutions work. Well-functioning markets are constantly changing, so too with financial markets. It was not long ago that most financial markets were domestic in scope and limited in institutional variety. Today financial markets are global in nature, with open foreign exchange markets and a growing variety of financial institutions and instruments. These changes have increased the importance of readily available and accurate information and of a well-designed regulatory framework. Moreover, with global financial markets being harsh in response to poorly managed economies, national, regional and international economic management has taken on increased importance. This course, therefore, will examine financial markets in terms of the tools it provides to the risk manager as well as looking at the risks, especially those of a systemic nature that are often created and propagated by financial markets.

#### MTRM6040: QUANTITATIVE ANALYSIS OF FINANCIAL DATA

This is a course in quantitative risk management and financial econometrics. In this course, focus will be on the statistical modeling of financial time series (asset prices and returns) with an emphasis on modeling volatility and correlation of quantitative risk management. This course discusses the various approaches to analyze and model financial data with real and stimulated data via the computer package R (or other programming language).

#### MTRM6070: ERM CONCEPT, FRAMEWORK AND PROCESS

This course aims to provide students with a good understanding of Enterprise Risk Management (ERM) and the regulatory frameworks. At the end of the course, students should be able to execute ERM at the strategic level to drive decision-making. They should demonstrate an understanding of the ERM concept, the components of 120 an ERM framework and be able to evaluate the appropriateness of a framework in a given situation and understand each step of the ERM process.

# **ERM Capstone Project**

During the final Semester of the M.Sc. Enterprise Risk Management programme, students are required to prepare and present a research paper in a relevant topical area. While not as comprehensive as a Master's thesis, the research paper submitted is expected to meet the rigorous requirements of a graduate level research paper. Students will be expected to develop a substantive research question/hypothesis statement, investigate and compile a comprehensive literature review, identify and undertake an appropriate methodology to address the research question and compile the research report summarizing the work done.

Students may work individually, or in groups of no more than three students if we have an odd number cohort and no more than two students for even number group, and must work under the guidance of a supervisor. Supervisors must be current lecturers of the programme, and their course(s) should be relevant to the research area chosen. The course coordinator can assist each student or group in finding a supervisor, and students are reminded to work closely with their supervisors to ensure that work is completed and submitted on time. Students or group leaders must submit a research proposal to the course coordinator for approval.

## **Coursework Assignments**

All assessments will be administered through the MSBM-ELS. The assignment must be uploaded to the drop box in the course container but a copy must also be submitted at the MSBM Reception desk.

- Submit your completed assessments within the timelines specified on the course outline and examination schedule.
- All coursework grades can be accessed via MSBM's Executive Learning Space (ELS).
- Coursework marks will not be given out over the telephone or to third parties.

## **Examinations**

All examinations for MSBM graduate programmes are regulated by the Office of Graduate Studies and Research and the UWI examinations Section.

Final examination marks will not be given out to students who visit the office, to students who telephone or to third parties. If you wish to view your final mark for a course, you must do so online (unofficial transcript). Final examination marks will be disseminated by the Examinations Section of the UWI Mona and not by MSBM.

#### GPA for Coursework/Exam

A student who fails an element of a course that counts towards the final grade (either coursework or final examination) will be deemed to have that course. They will be assigned the grade FC or FE (Fail Coursework, Fail Exam) if they obtain an overall mark of 50% or higher. **In order to pass a course you** <u>must pass both</u> <u>the coursework and the final examination</u>. You must re-sit the section of the course (coursework or final examination) you failed. If you fail both sections, you must re-sit the entire course (coursework and final examination).

# **Marking Scheme**

The marking scheme for Higher Degrees is as follows:

GRADE	MARK %
<b>A</b> <sup>+</sup>	90-100
Α	80-89
A-	75-79
B⁺	70-74
В	65-69
В-	60-64
C⁺	55-59
С	50-54
F1	45-49
F2	40-44
F3	0-39
FC/FE	≥50

Where graduate students write undergraduate examinations for postgraduate credit those examinations shall be graded in accordance with the above scheme.

Learn more: https://www.uwi.edu/postgradgpa/how-it-works

# The Award of Distinction and of High Commendation

The University's requirements of a minimum GPA for Postgraduate taught programmes is 2.0. Students who matriculate to the University in August 2024 and after must earn this minimum grade point average in their taught programmes. It does not apply to continuing postgraduate students. Note that individual department, college, school, or programme requirements may exceed this minimum. All other existing requirements, both faculty and university, that are based on any calculated GPA will apply accordingly.

GPA	CATEGORY
3.70	DISTINCTION
3.30 - 3.69	MERIT
2.00 - 3.29	PASS
< 2.0	FAIL

- Based on overall programme GPA
- Research project will be considered another course for the calculation of programme GPA
- Failure / repeating of any course(s) will NOT disqualify from 'distinction' if overall GPA  $\ge$  3.70
- Professional doctorates: Distinction =  $\geq$  3.70 in Courses + High Commendation in Research

Learn more: https://www.uwi.edu/postgradgpa/degree-requirements

# **Plagiarism**

The unauthorized and/ or unacknowledged use of another person's intellectual efforts, ideas, and creations under one's own name is regarded as a form of cheating. If a student is found guilty of plagiarism, the student will be awarded a fail grade in the course concerned and may also be subject to other disciplinary actions. Please note that all assessments that include essays will be submitted through TURNITIN by the lecturer.

# Graduate Coursework Accountability Statement

All students registered for postgraduate courses in the Faculty of Social Sciences, are required to attach a signed coursework accountability statement to the front of any document submitted as a component of coursework save that when coursework consists of an invigilated examination no accountability statement is required and where the submission is entirely in electronic form, the student shall make an equivalent declaration electronically.

Learn More:

https://www.mona.uwi.edu/postgrad/sites/default/files/postgrad/uploads/Graduate%20Coursework%20A ccountability%20Statement.pdf



See Graduate Tuition Guidelines on the MSBM website for fees and schedule of payments: https://www.mona.uwi.edu/msbm/sites/msbm/files/Graduate%20Tuition%20Fees%20\_2024-2025.pdf



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