MA6616: PROJECT

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Project

Subject Code
MA - Mathematics
Course Number
6616

Academic Unit
Mathematics (MA)

College/School
College of Science (SI)

Course Duration
Two Semesters

Credit Units
0-1

Level
P5, P6 - Postgraduate Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Part II Course Details

Abstract
This course aims to:
· enhance students' awareness and exposure to advanced topics in financial mathematics and statistics;

· broaden students' knowledge and keep them abreast of recent advances in areas of financial mathematics and statistics; and
· develop students' skills in collaboration, communication, and presentation.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Discuss advanced topics of financial mathematics and statistics.		x	x	
2	Describe various areas of financial mathematics and statistics by conducting literature search and integrating up-to-date research development to their courses of study.		x	x	x
3	Apply effective communication skills of presenting Mathematical knowledge professionally.		x	x	x
4	Deliver a presentation summarizing research advances and/or progress in specific topic(s).		x	x	x

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Seminar participation	Students will participate in seminars, consultation, project (or group project) to acquire specific knowledge and techniques, exchange academic ideas and improve quality of written work.	1, 2, 3, 4	
2	Seminar presentation	Student will give presentation which enables them to report research development of specific topic(s) orderly and/or to relate its relevance to subject knowledge.	1, 2, 3, 4	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Report	1, 2, 3, 4	50	It should include students' own account of investigations and findings, with a systematic and critical exposition of knowledge in literature. The student is also required to present materials coherently, with all the necessary references stated	Yes
2	Seminar participation	1, 2, 3, 4	20	Participation in seminar or other academic activities engages students in appreciating more advanced topics of their interest.	Yes
3	Seminar presentation	1, 2, 3, 4	30	Students are assessed on their ability of presenting substantial knowledge and research development of chosen topic(s).	Yes

Continuous Assessment (%)

100

Additional Information for ATs

100% coursework assessment (based on report, seminar participation and seminar presentations.)

Students are required to conduct (group) projects, write project reports, and give seminar presentations on a date set by the course examiner.

Assessment Rubrics (AR)

Assessment Task

1. Report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

DEMONSTRATION of the understanding of the basic principles of research ethics

Excellent

(A+, A, A-) Consistently demonstrates a comprehensive understanding of financial mathematics and statistics and a thorough investigation on research development

Good

(B+, B, B-) Adequately demonstrates an understanding of financial mathematics and statistics and an investigation on research development

Fair

(C+, C, C-) Demonstrates some understanding of financial mathematics and statistics and a basic investigation on research development

Marginal

(D) Demonstrates some understanding of financial mathematics and statistics and a simple investigation on research development

Failure

(F) Demonstrates little understanding of financial mathematics and statistics and unsuccessful investigation on research development

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Assessment Task

2. Seminar participation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

CAPACITY FOR SELF-DIRECTED LEARNING to understand recent research topics and frontiers of applied mathematics as well as mathematical knowledge and presentation skills.

Excellent

(A+, A, A-) Consistently demonstrates a thorough understanding of financial mathematics and statistics and distinct improvement in quality of written work and presentation

Good

(B+, B, B-) Adequately demonstrates an understanding of financial mathematics and statistics and improvement in quality of written work and presentation

Fair

(C+, C, C-) Demonstrates some understanding of financial mathematics and statistics and basic improvement in quality of written work and presentation

Marginal

(D) Demonstrates some understanding of financial mathematics and statistics and improves the quality of written work and presentation in a little scale

Failure

(F) Consistently demonstrates a thorough understanding of financial mathematics and statistics and no improvement in quality of written work and presentation

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Assessment Task

3. Seminar presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

ABILITY to report research development of specific topic(s) orderly and/or to relate its relevance to subject knowledge.

Excellent

(A+, A, A-) Demonstrates a comprehensive understanding of financial mathematics and statistics and strong presentation ability to report the research development

Good

(B+, B, B-) Demonstrates an understanding of financial mathematics and statistics and presentation ability to report the research development

Fair

(C+, C, C-) Demonstrates some understanding of financial mathematics and statistics and basic presentation ability to report the research development

Marginal

(D) Demonstrates some understanding of financial mathematics and statistics and can simply report the research development

Failure

(F) Demonstrates little understanding of financial mathematics and statistics and is unable to report the research development

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Assessment Task

1. Report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

DEMONSTRATION of the understanding of the basic principles of research ethics

Excellent

(A+, A, A-) Consistently demonstrates a comprehensive understanding of financial mathematics and statistics and a thorough investigation on research development

Good

(B+, B) Adequately demonstrates an understanding of financial mathematics and statistics and an investigation on research development

Marginal

(B-, C+, C) Demonstrates some understanding of financial mathematics and statistics and a basic investigation on research development

Failure

(F) Demonstrates little understanding of financial mathematics and statistics and unsuccessful investigation on research development

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Assessment Task

2. Seminar participation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

CAPACITY FOR SELF-DIRECTED LEARNING to understand recent research topics and frontiers of applied mathematics as well as mathematical knowledge and presentation skills.

Excellent

(A+, A, A-) Consistently demonstrates a thorough understanding of financial mathematics and statistics and distinct improvement in quality of written work and presentation

Good

(B+, B) Adequately demonstrates an understanding of financial mathematics and statistics and improvement in quality of written work and presentation

Marginal

(B-, C+, C) Demonstrates some understanding of financial mathematics and statistics and basic improvement in quality of written work and presentation

Failure

(F) Consistently demonstrates a thorough understanding of financial mathematics and statistics and no improvement in quality of written work and presentation

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Assessment Task

3. Seminar presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

ABILITY to report research development of specific topic(s) orderly and/or to relate its relevance to subject knowledge.

Excellent

(A+, A, A-) Demonstrates a comprehensive understanding of financial mathematics and statistics and strong presentation ability to report the research development

Good

(B+, B) Demonstrates an understanding of financial mathematics and statistics and presentation ability to report the research development

Marginal

(B-, C+, C) Demonstrates some understanding of financial mathematics and statistics and basic presentation ability to report the research development

Failure

(F) Demonstrates little understanding of financial mathematics and statistics and is unable to report the research development

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Part III Other Information

Keyword Syllabus

- Independent study
- Literature search
- Project or group project
- Communication and presentation skills

Reading List

Compulsory Readings

	Title
1	Steven E. Shreve, Stochastic Calculus for Finance II: Continuous-Time Models, Springer, 2010

Additional Readings

	Title
1	Nil