MA6617: DISSERTATION

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Dissertation

Subject Code
MA - Mathematics
Course Number
6617

Academic Unit
Mathematics (MA)

College/School
College of Science (SI)

Course Duration
Two Semesters

Credit Units
0-6

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

· develop a student’s expertise in his/her chosen subject area through application of mathematical theory and analytical techniques; and
· demonstrate a student’s ability to present and organize subject knowledge scholarly in an independent research.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	carry out independent study for problem solving and solution seeking.	20	x		
2	integrate mathematical knowledge and techniques of diverse subjects in formulating and analyzing practical problems.	20	x	x	
3	assess critically appropriateness of research methodology and strategies in approaching problems.	20	x	x	
4	justify mathematical results with substantial rigor and numerical illustrations.	20	x	x	x
5	prepare a coherent dissertation with effective presentation of literature and analysis of results.	20	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	Consultation/ Supervision	students will identify appropriate dissertation topics, acquire specific knowledge and techniques, exchange academic ideas and improve quality of written work.	2, 3, 4, 5	
2	Individual Work	students will acquire knowledge and skills necessary for project completion, and execute the associated work with sufficient diligence.	1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Dissertation proposal	2, 3	10	Each student is required to submit a dissertation proposal which outlines principal question(s) of investigation, suggested methodology and relevance of the chosen topic to specific discipline(s).	Yes
2	Continuous progress	1, 2, 3, 4	10	Student's progress is monitored regularly so as to identify any problem encountered in study and ensure he/she is likely to complete the dissertation timely in a satisfactory manner.	Yes
3	Dissertation	1, 2, 3, 4, 5	40	It should include student's 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
4	Oral presentation (with Question-Answer session)	5	40	Each student is also assessed on the ability to communicate aims, methodology and investigations/ findings of the dissertation effectively.	Yes

Continuous Assessment (%)

100

Additional Information for ATs

100% dissertation work.

This course cannot be repeated.

Assessment Rubrics (AR)

Assessment Task

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

Criterion

Literature review on the relative field and general developing trend

Excellent

(A+, A, A-) Demonstrates a thorough understanding of the the relative field and places the study within the larger context of the scholarly literature

Good

(B+, B, B-) Sufficiently demonstrates an understanding of the the relative field and places the study within the large context of the scholarly literature

Fair

(C+, C, C-) Demonstrates some understanding of the the relative field and places the study within the basic context of the scholarly literature

Marginal

(D) Demonstrates limited understanding of the the relative field and places the study within the limited context of the scholarly literature

Failure

(F) Demonstrates little understanding of the the relative field and places the study within little context of the scholarly literature

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Assessment Task

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

Criterion

Explanation of a specific field in depth

Excellent

(A+, A, A-) Consistently demonstrates a deep understanding and explanation of the relative field

Good

(B+, B, B-) Adequately demonstrates an understanding and explanation of the relative field

Fair

(C+, C, C-) Demonstrates some understanding and explanation of the relative field

Marginal

(D) Demonstrates limited understanding and explanation of the relative field

Failure

(F) Demonstrates little understanding and explanation of the relative field

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Assessment Task

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

Criterion

Realization of learning and creativity in rigor

Excellent

(A+, A, A-) Consistently exhibits a thorough understanding of the research project in the dissertation

Good

(B+, B, B-) Sufficiently demonstrates comprehension of the research project in the dissertation

Fair

(C+, C, C-) Displays a moderate and intermediate grasp of the research project, clearly articulated in the dissertation

Marginal

(D) Demonstrates basic understanding of the research project in the dissertation

Failure

(F) Demonstrates little understanding of the research project in the dissertation

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Assessment Task

4. Oral presentation (with Question-Answer session) (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Comprehensive description on both general and specific field

Excellent

(A+, A, A-) Displays a thorough understanding of project details and effectively communicates them in the oral presentation

Good

(B+, B, B-) Adequately demonstrates an understanding of project details and communicates them in the oral presentation

Fair

(C+, C, C-) Demonstrates an intermediate understanding of project details and effectively communicates them during oral presentations

Marginal

(D) Exhibits a basic understanding of project details and conveys them in the oral presentation

Failure

(F) Lacks comprehension of project details and is unable to effectively communicate them in the oral presentation

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Assessment Task

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

Criterion

Literature review on the relative field and general developing trend

Excellent

(A+, A, A-) Demonstrates a thorough understanding of the the relative field and places the study within the larger context of the scholarly literature

Good

(B+, B) Sufficiently demonstrates an understanding of the the relative field and places the study within the large context of the scholarly literature

Marginal

(B-, C+, C) Demonstrates some understanding of the the relative field and places the study within the basic context of the scholarly literature

Failure

(F) Demonstrates little understanding of the the relative field and places the study within little context of the scholarly literature

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Assessment Task

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

Criterion

Explanation of a specific field in depth

Excellent

(A+, A, A-) Consistently demonstrates a deep understanding and explanation of the relative field

Good

(B+, B) Adequately demonstrates an understanding and explanation of the relative field

Marginal

(B-, C+, C) Demonstrates some understanding and explanation of the relative field

Failure

(F) Demonstrates little understanding and explanation of the relative field

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Assessment Task

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

Criterion

Realization of learning and creativity in rigor

Excellent

(A+, A, A-) Consistently exhibits a thorough understanding of the research project in the dissertation

Good

(B+, B) Sufficiently demonstrates comprehension of the research project in the dissertation

Marginal

(B-, C+, C) Demonstrates basic understanding of the research project in the dissertation

Failure

(F) Demonstrates little understanding of the research project in the dissertation

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Assessment Task

4. Oral presentation (with Question-Answer session) (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Comprehensive description on both general and specific field

Excellent

(A+, A, A-) Displays a thorough understanding of project details and effectively communicates them in the oral presentation

Good

(B+, B) Adequately demonstrates an understanding of project details and communicates them in the oral presentation

Marginal

(B-, C+, C) Exhibits a basic understanding of project details and conveys them in the oral presentation

Failure

(F) Lacks comprehension of project details and is unable to effectively communicate them in the oral presentation

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Part III Other Information

Keyword Syllabus

No formal syllabus. Students will be required to undertake individually supervised research and dissertation preparation.

Reading List

Compulsory Readings

	Title
1	Halyna M. Kornuta and Ron W. Germaine, A Concise Guide to Writing a Thesis or Dissertation, Routledge, 2nd Edition

Additional Readings

	Title
1	Nil