



# Course Specification

## (Postgraduate Programs)

Course Title: **Selected Topics in Applied Mathematics (1)**

Course Code: **MAT 6281**

Program: **Master of Science in Mathematics**

Department: **Mathematics and Statistics**

College: **Science**

Institution: **Imam Mohammad Ibn Saud Islamic University**

Version: **2024 – V1**

Last Revision Date: **1446/04/05 (08/10/2024)**



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## A. General information about the course:

### 1. Course Identification

<b>1. Credit hours:</b>					
3 (2 Lectures, 0 Lab, 2 Tutorial)					
<b>2. Course type</b>					
A.	<input type="checkbox"/> University	<input type="checkbox"/> College	<input checked="" type="checkbox"/> Program	<input type="checkbox"/> Track	<input type="checkbox"/> Others
B.	<input type="checkbox"/> Required		<input checked="" type="checkbox"/> Elective		
<b>3. Level/year at which this course is offered: Level 3-4 / Year 2</b>					
<b>4. Course general Description:</b>					
Course dependent.					
<b>5. Pre-requirements for this course (if any):</b>					
None.					
<b>6. Co-requisites for this course (if any):</b>					
None.					
<b>7. Course Main Objective(s):</b>					
<ul style="list-style-type: none"> <li>This course is designed to enable students to study different special topics of interest, which are carefully selected from Applied Mathematics topics. The course covers selected topics in mathematics suggested by the student's supervisor and approved by the chairman and the department council each time this course is offered.</li> <li>To learn topics those are not formally offered by the program and receive appropriate academic credit.</li> </ul>					

### 2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100%
2	E-learning	0	0%
3	Hybrid <ul style="list-style-type: none"> <li>Traditional classroom</li> <li>E-learning</li> </ul>	0	0%
4	Distance learning	0	0%

### 3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	0
3.	Field	0
4.	Tutorial	30
5.	Others (specify)	0



Total	60
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## B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Identify Specific to each course of study.	K1, K2	3 lecture hours\week	Direct: Regular Exams
2.0	Skills			
2.1	Use techniques of proof in the corresponding subject.	S1, S2	Self-study	Direct: • Participations • Short Quizzes
2.2	Develop oral and technical writing skills through writing and oral presentation.	S4	Real-life problems	Direct: Homework and Mini projects
2.3	Analyze Internet in searching for scientific information	S3	Real-life problems	Direct: Short Quizzes
2.4	Choose out deep and not short proofs.	S1, S2	Self-study	Direct: Participations
3.0	Values, autonomy, and responsibility			
3.1	Work with independence and responsibility.	V1, V2	Personal questions	Direct: Participation
3.2	Lead team works.	V1, V3	Teamwork and class discussions.	Direct: Homework and Mini projects

## C. Course Content

No	List of Topics	60
1.	Specific to each course of study	60
Total		60

## D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	HomeWorks, Quizzes, Mini projects	During the semester	30%



No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
2.	Midterm	Week 9-10	30%
3.	Final Exam	Week 16-17	40%

\*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

## E. Learning Resources and Facilities

### 1. References and Learning Resources

Essential References	• To be specified according to the course syllabus
Supportive References	1. To be specified according to the course syllabus
Electronic Materials	None
Other Learning Materials	None

### 2. Educational and Research Facilities and Equipment Required:

Items	Resources
<b>facilities</b> (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	<ul style="list-style-type: none"> <li>Each class room should be equipped with a whiteboard and a projector.</li> <li>Laboratories should be equipped with computers and an internet connection.</li> </ul>
<b>Technology equipment</b> (projector, smart board, software)	The rooms should be equipped with data show and Smart Board.
<b>Other equipment</b> (depending on the nature of the specialty)	None

## F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	During the semester and at the end of the course each student will complete two evaluation forms.
Effectiveness of Students assessment	Instructor	At the end of each semester the course instructor should complete the course report, including a summary of student questionnaire responses appraising progress and identifying changes that need to be made if necessary.
Quality of learning resources	Students	During the semester and at the end of the course each student will complete two evaluation forms.



Assessment Areas/Issues	Assessor	Assessment Methods
The extent to which CLOs have been achieved	Instructor	At the end of each semester the course instructor should complete the course report, including a summary of student questionnaire responses appraising progress and identifying changes that need to be made if necessary.
Other	None	

**Assessors** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

### G. Specification Approval

COUNCIL /COMMITTEE	MATHEMATICS AND STATISTICS DEPARTMENT COUNCIL
REFERENCE NO.	8/1446
DATE	1446/04/05 (08/10/2024)

