

# Master of Science in Mathematics

College of Science

King Faisal University

<b>Program Name</b>	Master of Science in Mathematics
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## 1. Introduction

The study began with the master's program in mathematics in the academic year 1420/1421 AH corresponding to 2000/2001. The program aims to graduate distinguished cadres capable of scientific research to contribute to the scientific and technical development of the country.

There are two tracks for the program:

**Track 1:** Course Track: The student successfully passes 42 units (24 credits, 16 electives, 1 essay and 2 modules)

**Track2:** Course of courses and thesis: The student successfully passes 24 units of compulsory study, in addition to preparing an accepted research thesis in one of the disciplines of mathematics.

## 2. Program Information

<b>Program Name</b>	Master of Science in Mathematics
<b>College</b>	College of Science
<b>Track</b>	Mathematics
<b>Level</b>	Postgraduate
<b>Degree</b>	MSc
<b>Years of Study</b>	Six Semesters
<b>Credit Hours</b>	42 or 24
<b>Additional Requirements</b>	

## 3. Admission Requirements

- To achieve the admission requirements specified in the unified list of postgraduate studies in universities.
- The applicant must demonstrate his ability and ability in mathematics science based on the acceptance test offered by the department
- Progress to pass the TOEFL test with a score of not less than 60, or IELTS not less than 5 or Step not less than 83.

## 4. Study Plan

### First Year

Course Code	Course Title	Credit Hours
08171601	Numerical Analysis I	3
08171631	Abstract Algebra I	3
08171641	Real Analysis I	3
08171643	Complex Analysis I	3

### Second (Pure Mathematics)

Course Code	Course Title	Credit Hours
08171632	Abstract Algebra II	3
08171642	Real Analysis II	3
08171644	Complex Analysis II	3
08171660	Topology	3

### Second (Applied Mathematics)

Course Code	Course Title	Credit Hours
08171602	Numerical Analysis II	3
08171604	Ordinary differential equations I	3
08171606	partial differential equations	3
08171608	Mathematical Methods	3

### Third (Courses' track)

Course Code	Course Title	Credit Hours
	Elective Course 1	4
	Elective Course 2	4
	Elective Course 3	4
	Elective Course 4	4
08171600	Research Project	2

### Third (Thesis's track)

Course Code	Course Title	Credit Hours
08171700	Thesis	8

## Elective Courses

Course Code	Course Title	Credit Hours
08171611	Calculus of Variations	4
08171612	Ordinary Differential Equations II	4
08171613	Theory of Partial Differential Equations I	4
08171614	Theory of Partial Differential Equations II	4
08171615	Boundary Value Problems	4
08171616	Approximation Theory	4
08171617	Numerical Methods of Ordinary Differential Equations	4
08171618	Numerical Methods of Partial Differential Equations	4
08171621	Mathematical Logics I	4
08171622	Mathematical Logics II	4
08171623	Set Theory	4
08171624	Model Theory	4
08171625	Proof Theory	4
08171626	Computability Theory	4
08171633	Abelian group	4
08171634	Arithmetic Algebra	4
08171635	Rings and Modules	4
08171636	Fields and Galois theory	4
08171637	Groups Theory	4
08171645	Harmonic Analysis	4
08171646	Functional Analysis I	4
08171647	Functional Analysis II	4
08171648	Theory of Operators	4
08171649	Banach Algebra	4
08171651	Numerical Methods of Linear Algebra	4
08171653	Special Functions in Applied Mathematics	4
8171654	Integration Transforms and Operation Methods	4
8171655	Applied Functional Analysis I	4
8171656	Applied Functional Analysis II	4
8171657	Theory of Distributions	4
8171661	Algebraic Topology I	4
8171662	Algebraic Topology II	4
8171671	Differential Geometry I	4
8171672	Differential Geometry II	4
8171673	Algebraic Geometry	4