

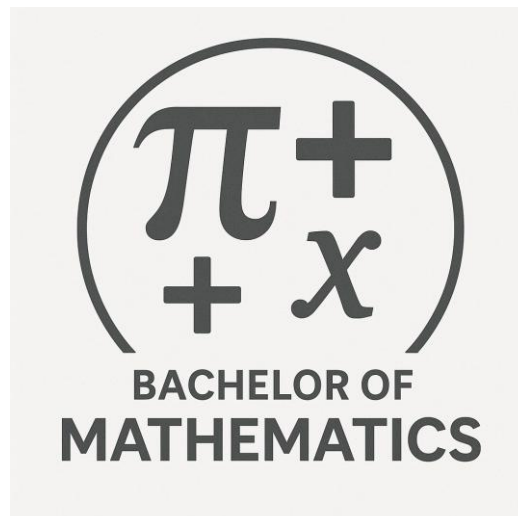


People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
Setif 1 University – Ferhat Abbas



Faculty of Sciences

Bachelor's Degree in Mathematics



Presentation and Objectives of the Specialty:

The Bachelor of Mathematics program aims to provide students with a solid theoretical and methodological training in mathematics. The main objectives of this training are as follows:

- Acquire the fundamental bases of mathematics (algebra, analysis, geometry, probability, statistics, logic, etc).
- Understanding of rigorous reasoning, demonstrations and mathematical structures.
- Ability to formalize a problem and reason abstractly.
- Critical thinking, rigor, autonomy, and perseverance in the face of complexity.
- Mastery of computer and digital tools related to mathematics.
- Mathematically model a concrete phenomenon.
- Manipulate abstract concepts and perform rigorous demonstrations.
- Work independently and as part of a team on mathematical or interdisciplinary projects.
- Communicate mathematical results clearly, both written and oral.

Admission Requirements:

- Hold a Baccalaureate in mathematics, technical mathematics, or natural sciences.
- Ranking based on Baccalaureate average.

Career Opportunities:

- Mathematics teacher at the CEM (Centre for the Management of Mathematics).
- Prepare for further studies (Apply for a Master's degree in mathematics).
- Access career opportunities (data analysis, modeling, research, computer science, quantitative finance, etc).

Program Organization and Official Program Duration:

Program Overview:

Semester 01 :

Analysis 1
Algebra 1
Algorithms and Data Structure 1
Machine Structure 1
Scientific Terminology and Written Expression
Physics 1
English

Semester 02 :

Analysis 2
Algebra 2
Algorithms and Data Structure 2
Machine Structure 2
Introduction to Probability and Descriptive Statistics
Information and Communication Technology
Physics 2
Programming Tools for Mathematics 1

Semester 03 :

Analysis 3
Algebra 3
Introduction to Topology
Numerical Analysis 1
Mathematical Logic
Programming Tools for Mathematics 1
History of Mathematics

Semester 04 :

Analysis 4
Algebra 4
Complex Analysis
Numerical Analysis 2
Probability
Geometry
Application of Mathematics to Other Sciences

Semester 05:

Measurement and Integration
Normalized Vector Spaces
Differential Equations
Mathematical Physics Equations
Unconstrained Optimization
Introduction to Mathematics Teaching

Semester 06 :

Mechanics
Constrained Optimization
Integral Transformations in L_p Spaces
Differential Geometry
Ethics and Professional Conduct in Teaching and Research

Curriculum Highlights:

The Bachelor's degree in Mathematics is designed to train students in the field of mathematics. The main objective of this program is to equip students with the necessary and fundamental knowledge in mathematics.

It provides students with the essential skills to integrate into professional environments such as teaching or the economic and industrial sectors.

In addition, it allows students to enroll in a Master's degree in mathematics in any specialization.

Language of instruction:

English

Admission Information:

Current application of Orders 171 and 1023:

- The acquisition of skills and knowledge is assessed each semester through continuous assessment and a final exam with a certain weighting.
- The transition from the first to the second year and from the second to the third year is subject to the conditions detailed in Orders 171 and 1023.
- The student's assessment covers, depending on the program, lectures, practical work, and tutorials.

Program Outline:

The tables provided in the previous section "Program Overview"

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