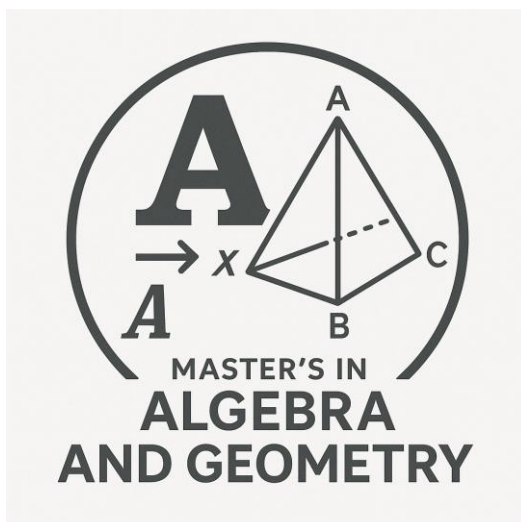




People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
Sétif 1 University – Ferhat Abbas

Faculty: Sciences

Master's Degree in Algebra and Geometry



Présentation et objectifs de la formation :

The development of mathematics is one of the major indicators of the development of science and technology. The proposed research Master's aims to provide the students concerned with solid training that will enable them to begin research work for the preparation of a doctorate, and beyond that, a career as a researcher. The choice of the "Algebra and Geometry" specialization is justified by the shortage of teacher-researchers in these specialties. In addition, the two themes addressed in our Master's interact mutually and form a coherent subject on which intense research is conducted throughout the world.

Admission requirements :

- ❖ All specialties of the mathematics degree (LMD) can give access to the Master's in Algebra and Geometry.

Career Prospects/ Professions :

- ❖ Teaching in secondary, middle and primary schools.
- ❖ Preparation of other doctoral degrees in different fields of research in higher mathematics

Organization of studies and official duration of the program

Program Overview:

Semester 1 :

- Introduction to Group Theory
- Rings
- Modules 1
- Functional Analysis Methods
- Complex Analysis 1
- Non-Standard Analysis
- English 1

Semester 2 :

- Abelian, Nilpotent, and Solvable Groups
- Fields
- Modules 2
- Lie Groups and Algebras
- Complex Analysis 2
- Non-Standard Analysis Techniques in Differential Geometry
- Ethics and Professional Conduct

Semester 3 :

- Generalized Nilpotent Groups
- Galois Theory
- Tensor Product
- Sub-Riemannian Geometry
- Complex Geometry
- Open Source Software
- English 2

Semester 4 :

- Internship in the research laboratory leading to a final dissertation and a defense

Admission Information:

The current application of Articles 171 and 1023 of Decrees:

- ❖ Skills and knowledge acquisition are assessed every six months through continuous assessment and a final exam.
- ❖ Progress from the first to the second year is automatic if the student has completed the first two semesters of the training program.
- ❖ The student's assessment focuses on, depending on the training program: lectures, practical work, tutorials, and practical internships.

Language of instruction:

French and English

Training framework:

The tables provided in the previous section "Program Overview"

Coordinator of the Program: Pr. N. BENSALEM

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