



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

Faculty: Sciences

Master in Data Engineering and Web Technology

Presentation and Objectives of the Specialty:

The Master's in Data Engineering and Web Technology (IDTW), known as Big Data or Data Sciences, is based on the development of computer techniques enabling the acquisition, processing, storage and exploitation of enormous quantities of data . Faced with the ever-increasing volume of data produced daily by many industries and maintained by the rise of new multimedia technologies from the Internet of Things and the Web of Sciences, new useful applications for commerce, education and other economic sectors are proving crucial .Thus, the mastery, use and exploitation of this data are essential and require a very high level of expertise with cutting-edge skills.

- This master's degree aims to train students for the professional market as well as for an academic career. It offers students a set of skills related to web technologies and its applications. It also offers them skills in the field of machine learning, which has become a very promising area of research.

Admission requirements:

- Bachelor's degree in computer science
- Ranking in the academic curriculum

Career Prospects/Professions :

- Universities
- Research center (CERIST, CDTA, etc.)
- Economic companies (Algeriatelecom , Banks, etc.)

Organization of Studies and Official Duration of the Program:

Program Overview :

Semester 01:

Advanced Databases
Advanced Web Programming
Advanced Algorithmics and Complexity
Distributed Systems
Modeling and Simulation
Advanced Artificial Intelligence
English 1
Corruption and Work Ethics

Semester 02:

Machine Learning 1
Problem-solving methods
Semantic Web and Ontologies
Web Application Security

Curriculum highlights :

This training allows you to acquire the basic teachings of the web and machine learning, these teachings allow a professional profile in the modern web for students who will be directed to the professional world as well as a research profile for those who will have the opportunity to continue their career in research.

Admission Information :

The current application of Articles 171 and 1023 of the decrees:

- The acquisition of skills and knowledge is assessed every six months through continuous assessment and a final exam.
- The transition from the first to the second year is automatic if the student has validated the first two semesters of the training program.
- The student's assessment covers, depending on the training program, lectures, practical work, tutorials and practical placements.

Core Courses

Advanced Databases
Advanced Web Programming
Advanced Algorithmics and Complexity
Distributed Systems
Modeling and Simulation
Advanced Artificial Intelligence
Machine Learning 1
Problem-solving methods
Semantic Web and Ontologies

Advanced Topics

Multimedia Content
Cloud Computing
Data Warehouses
Machine Learning 2
Web mining
Web Information Search
Web 3D
Multi-agent systems

Multimedia Content
Cloud Computing
English2
Pedagogy

Semester 03:

Data Warehouses
Machine Learning 2
Web mining
Web Information Search
Web 3D
Multi-agent systems
English3
Research methodology

Semester 04:

Project / Stage

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Language of instruction :

French and English

Training outline :

The tables provided in the previous section
"Program Overview"

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