

Mathematics and Computer Science Department
COORDINATOR OF THE PROGRAM
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**CAREER OPPORTUNITIES
 AND INTEGRATION**

Successful candidates are prepared to be hired to work in the following fields

- Doctoral researcher in the Signals, Distributed Systems and Artificial Intelligence laboratory at ENSET Mohammedia.
- Researcher in scientific research laboratories of national and international academic structures to carry out research work in the fields of Artificial Intelligence, High-Performance Computing, Parallel and Distributed Systems, Computer Vision, Block Chain, etc.
- Researcher and Developer in the R&D laboratories of national and international companies to carry out R&D work in the fields of Artificial Intelligence, High-Performance Computing, Parallel and Distributed Systems, Computer Vision, Block Chain, etc.
- AI and Data Scientist Engineer and Researcher for various companies such as banks, insurance companies, service companies, stock exchanges, IT security companies, infrastructure and organisation security companies, control and audit companies, telecoms companies, etc. ...
- Design and Development Engineer for IT, Web and Mobile applications based on backends requiring high-performance computing architectures based on Massively Parallel and Distributed systems based on Micro-services.
- Software and AI Engineer and Architect

OBJECTIVES OF THE PROGRAM

The aim of the SDIA Master's program, which focuses on Mathematics-Computer Science-Data Science and Artificial Intelligence, is to offer solid knowledge and skills in Applied Mathematics, Artificial Intelligence and High-Performance Computing. This course enables students to acquire skills in the design of intelligent systems with applications in various scientific and technical fields and in the use of the latest technologies in high-performance computing and distributed computing. The aim is to cover all the problems of processing and analysing massive data that can be encountered in scientific research and business.

SKILLS ACQUIRED ON COMPLETION OF THE PROGRAM

- Master the scientific fundamentals of applied mathematics, such as linear algebra, matrix calculation, statistics and probability.
- Deepen the level of mastery of graduates in the field of algorithms and the analysis of algorithmic complexity.
- Master the techniques of object-oriented design and programming using the two programming languages Java and Python.
- Master the theoretical aspects of artificial intelligence, distributed artificial intelligence, machines and deep learning.
- Design and implement distributed object-oriented applications using middleware that ensures interoperability in both synchronous and asynchronous ways.
- Master the theoretical and practical aspects of Artificial Intelligence and Distributed Artificial Intelligence.
- Developing computer applications with artificial intelligence and DAI functionalities using high-performance computing solutions based on massively distributed programming and massively parallel architectures based on clusters of GPUs deployed locally or TPUs in the Cloud...

ACCESS CONDITIONS :

Diplomas required :

- Fundamental, scientific and technical or professional bachelor degree in:
 - Computer science,
 - Mathematics and Computer Science,
 - Applied Mathematics
- Equivalent diploma in one of the above specialities.