Admission requirements

ENGLISH LANGUAGE REQUIREMENTS
CECRL B2 level in English, or CECRL B1 level in English and CECRL B2 level in French. All teaching materials will be provided both in English and French. Students are allowed to use English or French during exams.

ADMISSION REQUIREMENTS
All students who have completed four years in statistics or in applied mathematics in a higher education institution can apply.

Limited number of students: 30 per year

Contact

For any supplementary information or questions related to application, please contact:

jacques.giacomoni@univ-pau.fr

More information:
http://formation.univ-pau.fr/m-mathematics-msid

International Welcome Desk:
http://univ-pau.fr/en/welcome-desk
Overview

This degree is delivered after 12 months.
This program offers advanced courses on statistical analysis, machine learning and computer tools for handling data.
This program allows to continue with doctoral studies, either in an academic context or in an industrial context (collaboration between industry and UPPA).
The master is fully taught in English and is hosted at the College of Sciences and Technologies for Energy and Environment (STEE) of the Université de Pau et des Pays de l'Adour (UPPA) in France.
The STEE College has been founded within the framework of the prestigious French Initiative of Excellence label I-SITE (Initiatives Sciences, Innovation, Territories and Economy), obtained by our E2S-UPPA project.

Student Learning Outcomes

At the end of this program, the students in MSID will be able to:
• Conduct an appropriate statistical analysis
• Apply any classical statistical methods
• Construct and analyze an experimental design
• Propose and analyze a stochastic model
• Implement stochastic simulation methods
• Manage databases

Prospects for employment or further study

SECTORS:
• Industry
• Services
• Academic
FIELDS:
• Dependability and reliability analysis (RAMS)
• Data processing
• Biomedicine

POSITIONS:
• RAMS engineer
• Statistical analyst
• Data scientist
• Data processing engineer
• Biostatistician
• PhD students

Program objectives

• This programme aims to provide strong skills in stochastic modeling and statistical methods for data analysis, jointly with the associated computer tools.
• Courses are focusing both on applications in industry, especially in the area of quality control and safety analysis, and on applications in datamining and machine learning.
• Courses are taught by academics but also by engineers
• According to the excellency of students and their desire to pursue doctoral studies, courses about « advanced statistics » and « advanced applied probability » can be offered.

MASTER 2 - MSID

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<thead>
<tr>
<th>SEMESTER 1</th>
<th>2 ECTS</th>
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<tbody>
<tr>
<td>French</td>
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<tr>
<td>Reliability theory</td>
<td>4 ECTS</td>
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<tr>
<td>Survival analysis</td>
<td>4 ECTS</td>
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<tr>
<td>Design of experiments</td>
<td>4 ECTS</td>
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<tr>
<td>Statistical process control</td>
<td>2 ECTS</td>
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<tr>
<td>Tools for engineering reliability</td>
<td>4 ECTS</td>
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<tr>
<td>Datamining</td>
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<td>Deep learning</td>
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<tr>
<td>Advanced machine learning</td>
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<tr>
<td>Data challenge</td>
<td>2 ECTS</td>
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<tr>
<td>Literature review</td>
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<table>
<thead>
<tr>
<th>SEMESTER 2</th>
<th>10 ECTS</th>
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</thead>
<tbody>
<tr>
<td>Research or applied project</td>
<td></td>
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<tr>
<td>Internship</td>
<td>20 ECTS</td>
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</tbody>
</table>

The program is carried out in close collaboration with the LMAP research laboratory where scientific and experimental practicals will be performed. Students will also benefit from the global research environment and administrative support of the University and of the E2S I-site program.
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