

Field of study **Sciences and engineering**

Training available in

Initial training

Recognition of prior learning

How to apply :

<https://www.univ-gustave-eiffel.fr/en/formation/applications-and-enrolment/applications>

Course venue :

Campus Marne la Vallée - Champs sur Marne - Bâtiment Copernic 5 Boulevard Descartes 77420 Champs-sur-Marne

Calendar :

The second-year of the Master's degree is divided into two semesters. It is common to UGE and UPEC and all courses are held at UGE. The work placement is carried out in the second semester.

Contacts :

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More information :

For further details :

<https://www.univ-gustave-eiffel.fr/international/etudiants-internationaux>

Service Information,

Orientation et Insertion Professionnelle (SIO-IP) :

sio@univ-eiffel.fr / Tel : +33 1 60 95 76 76



Master's degree Mathematics and applications Probability and Statistics of New Data



UFR de Mathématiques (MATHS)

Master's degree M2

TO GET THERE

M2 is for students who have successfully completed a first year of a Master's degree in Pure or Applied Mathematics or in Mathematics-Computer Science or who can prove they have an equivalent level, as well as Grandes Ecoles students.

Applications are examined by a committee.

ACQUIRED SKILLS

On completion of the Master's programme, graduates will be able to:

- Master mathematical tools, whether differential, probabilistic, statistical or numerical, and adapt to their development and increasing complexity.
- Design and apply theoretical knowledge to respond in the most appropriate way to real and concrete problems in their area of expertise.
- Model random events.
- Recommend balanced solutions.
- Search for and use documentary resources optimally in order to explore new subjects or be able to innovate in subjects arising from everyday problems.

YOUR FUTURE CAREER

The Probability and Statistics of New Data pathway in the Mathematics and Applications Master's programme trains high-level mathematicians primarily for careers in data science and data processing, a field that is expanding with the widespread use of databases. It can also lead to teaching or research in industry or academia.

BENEFITS OF THE PROGRAM

Affiliated with top-level research laboratories (LAMA, CERMICS, LIGM) and the Labex Bézout Provides training tailored to the challenges posed by the large amount of data to be processed in the secondary and tertiary sectors. Regional coherence (Paris East) of the training. Work-study programme and sessions with professional partners.

More information



YEAR

STAGE (FI)**2 UE obligatoires à valider parmi les UE ci-dessous au S3 (ECTS:12)**

- Architecture Big Data
- Statistiques en Grande Dimension
- Calcul stochastique

Entre le S3 et le S4 : 4 cours à 6 Ects et 1 cours à 3 Ects (ECTS:27)

- Simulation et copules
- Méthodes de Monte Carlo et Algorithmes stochastiques
- Apprentissage statistique et applications
- Estimation empirique - Valeurs extrêmes
- Méthodes d'approximation déterministes et stochastiques
- Anonymisation et équité algorithmique
- Fondements des sciences de données
- Intro au Calcul de Malliavin et appli numériques en finance
- Sciences des données avancées
- Modélisation proba et stat pour l'épidémiologie
- Cas d'usage en lien avec le développement durable
- Apprentissage statistique pour le traitement du langage
- Vision par ordinateur et détection d'objets

Stage et Hackathon au S4 (ECTS:21)

- Stage
- Hackathon

APPRENTISSAGE (FA)**UE obligatoires à valider au S3 (ECTS:12)**

- Architecture Big Data
- Statistiques en Grande Dimension

Entre le S3 et le S4 : 4 cours à 6 Ects et 1 cours à 3 Ects (ECTS:27)

- Simulation et copules
- Apprentissage statistique et applications
- Estimation empirique - Valeurs extrêmes
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- Vision par ordinateur et détection d'objets

UE obligatoires à valider (ECTS:21)

- Projets
- Apprentissage
- Hackathon