

Field of study **Sciences and engineering**

Training available in

Apprenticeship

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 :**

Work placement period: April-September (minimum four months).

**Contacts :**

CARAYOL Arnaud (M1-M2)

ZARGAYOUNA Mahdi (M2)

Academic coordinator

VANTIEGHEN Nicolas (M2)

Academic secretary

Nicolas.Vantieghem@univ-eiffel.fr

Phone number : 01 60 95 77 83

Building : Copernic

Office : 2B179

SOLTANI Amel

Gestionnaire VAE

vae@univ-eiffel.fr

**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](mailto:sio@univ-eiffel.fr) / Tel : +33 1 60 95 76 76

## Master's degree Computer Science Intelligent systems and applications



Institut d'électronique et d'informatique Gaspard Monge (IGM)

Master's degree M2

### TO GET THERE

M1 in Computer Science or Computer Science Engineering.

### ACQUIRED SKILLS

The objective of this M2 is to provide students with the theoretical and practical foundations needed to design the future generations of intelligent systems and to train them in project management roles for a range of areas of application. The Master's is structured around three major orientations: firstly, modelling and simulation, secondly, data analysis, and lastly, diagnostics and maintenance. Students can apply for end-of-studies internships in one or more of these three areas.

The Master's provides high-level, diversified training predominantly in IT, which mainly covers:

- modelling and simulation of intelligent and multi-agent systems,
- modelling and simulation of intelligent systems,
- data analysis,
- reliability and maintenance of intelligent systems,
- acceptability of new intelligent systems.

### YOUR FUTURE CAREER

As well as in academia, there are also professional opportunities in the industry. Graduates can find jobs with operators and providers of IT services using intelligent systems.

These types of jobs are related to research and development: R&D engineer, intelligent systems designer, systems analyst, project manager, operations manager, etc. Regarding the academic world, graduates can pursue a PhD.

### BENEFITS OF THE PROGRAM

Course open to international students, with classes 100% in English. The teaching team is mainly made up of researchers involved in collaborative projects with industry. This course opens up the opportunity to move into research at the GRETTIA Laboratory and more generally, in the COSYS department of IFSTTAR, for students who wish to do so.

More information



# PROGRAM

## SEMESTER 3

### Data Analytics & Applications (ECTS:12)

- Introduction à l'analyse de données et ses outils
- Techniques Avancées en Analyse de Données et Apprentissage Automatique
- Sécurité des systèmes et données
- Calcul distribué
- Deep Learning pour les Systèmes Intelligents

### Modélisation, Simulation & Applications (ECTS:18)

- Méthodes pour les modèles et les simulations à grande échelle
- Programmation répartie et Services Web
- Systèmes Multi-Agents et Applications
- Modélisation et Simulation des réseaux
- Apprentissage par renforcement et contrôle optimal
- Recherche
- Gestion dans les Systèmes intelligents

## SEMESTER 4

### Data Science (ECTS:8)

- IA explicable pour les systèmes intelligents
- Sûreté de fonctionnement des systèmes intelligents
- Évaluation des techniques d'IA

### Projet 2 (ECTS:2)

- Ethique et acceptation des innovations

### Modélisation et simulation (ECTS:4)

- Optimisation pour les systèmes intelligents
- Décision et analyse dans les systèmes intelligents

### Stage (ECTS:16)