

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). Work-study programme: one week at a company, one week at university.

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) :

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Master's degree Computer Science Systems and Services for the Internet of Things



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 course provides skills in design, implementation and evaluation of solutions for the Internet of Things (IoT). These skills cover the design of communication mechanisms adapted to system constraints (energy consumption, limited computing and memory capacity) as well as processing and analysis tools for massive data collected by sensors.

This course addresses multiple technical skills in the cutting-edge field of the Internet of Things: exploiting sensor data, communication networks in constrained environments, data and sensor security, machine learning techniques, network and data service quality, and programming of objects.

YOUR FUTURE CAREER

There are many professional opportunities for M2 graduates: IoT consultant, full-stack developer for IoT systems, designer of constrained communication protocols and systems, systems and network administrator, pre-sales engineer for IoT systems, mobile application developer, etc.

They can also work in research, as the emergence of IoT systems and related new technologies has introduced new challenges in terms of communication, transport, security, storage and analysis of data (big data).

M2 graduates can also pursue a PhD in computer science.

BENEFITS OF THE PROGRAM

The teaching team is made up of faculty members who actively participate in collaborative projects with industry. This course is affiliated with the research activities of: - the LRT team at the Gaspard Monge Computer Science Laboratory (LIGM); - the GRETTIA Laboratory in the COSYS department of IFSTTAR. Multiple classes are taught in English. There are many job opportunities for graduates, including in research, as the development of IoT systems brings new challenges in the areas of communication, transport, security, storage and analysis of data (big data).

More information



PROGRAM

SEMESTER 3

Science de données 1 (ECTS:5)

- Introduction à l'analyse de données et ses outils
- Techniques Avancées en Analyse de Données et Apprentissage Automatique

Services 1 (ECTS:5)

- Techniques de conteneurisation et microservices
- Programmation mobiles (Android)

Systèmes 1 (ECTS:5)

- Sécurité des systèmes et des données
- Systèmes distribués et Cloud Computing

Réseaux 1 (ECTS:10)

- Collecte, transport et routage de données pour l'IoT
- Technologies d'accès sans fil pour l'IoT
- Modélisation et Simulation des réseaux

Projet & Communication 1 (ECTS:5)

- Anglais
- Gestion de projet

SEMESTER 4

Science de données 2 (ECTS:4)

- IA explicable pour les systèmes intelligents
- Qualité de services des flux de données

Services 2 (ECTS:4)

- DevOps : Intégration et déploiement continu
- Services Web et protocoles pour l'IoT

Systèmes 2 (ECTS:3)

- Architecture matérielle des devices IoT
- Capteur et chaînes de mesure

Réseaux 2 (ECTS:3)

- Réseaux cellulaires pour l'IoT
- Sécurité des réseaux IoT

Projet & Communication 2 (ECTS:2)

- Simulation de projet d'entreprise

Entreprise (ECTS:14)

- Stage