MASTER (EN) COMPUTER SCIENCE

Sciences de l'image

Institut Gaspard Monge (IGM)

FIELD Sciences, technologies, santé

Course suitable for

Continuing Education

Initial Education

Recognition of prior learning

Apprenticeship

- How to apply :

Apply using the eCandidat application. Please include in your application a certificate of the required degree, a transcript of grades, a personal statement and if possible a reference letter.

- Course venue :

Campus Descartes, Champs-sur-Marne, Marne-la-Vallée (bâtiment Copernic et ESIEE Paris).

- Calendar :

Internships (15 ECTS, 4 months min.)
In the dual study system: 3 days in the university, 2 days in the company.

- Contacts :

- Coordinator of the degree program : CARAYOL Arnaud (M1-M2)
- Academic coordinator : NOZICK Vincent (M2)
- Academic secretary : VANTIEGHEM Nicolas (M2)
Building : Copernic
Office : 2B179
Phone number : 01 60 95 77 83
Email : Nicolas.Vantieghem@u-pem.fr

For further details :
Information, Career guidance and Professional integration Department
(SIO-IP) : sio@u-pem.fr / +33 1 60 95 76 76

MASTER (EN) M2

ENTRY REQUIREMENTS

Acceptance to M2 requires 4 years of higher education after high school diploma, or the equivalent.

ACQUIRED SKILLS

The Master's degree provides students with the ability to process computerised images efficiently, create rendering engines and implement programs or applications in virtual or augmented reality and also provides them with knowledge of a wide range of image-related theories. Students also acquire the ability to create, manage and implement any IT project connected with imagery in general.

YOUR FUTURE CAREER

Job opportunities include research and development posts in major imaging companies (medical imaging, video games, digital post-production, mobile 3D, virtual & augmented reality) as well as software developer positions in 3D or image processing. Students also often move onto a PhD in image processing, computer vision, discrete geometry or computer graphics.

BENEFITS OF THE PROGRAM

Imaging Science track provides a comprehensive knowledge of all the theoretical and practical fields in computerized imaging. They include, from the most theoretical to the most practical : Mathematical morphology, Discrete geometry, Image processing, Computer vision, Augmented reality, Virtual reality, Image synthesis and GPGPU.

This Master's degree is connected to a renowned research lab and supported by Labex Bezout (Labex is a cluster of Excellence backed by a research laboratory and funded by the French government).

The lectures may be given in English if a non-French-speaking student is enrolled in the master's degree.

STUDY PROGRAM

Semestre 3

Compétence transversales Programmation générique en C++ - Anglais - Gestion de projet informatique ou initiation à la recherche -
UE Cadre digital discret Géométrie discrète - Morphologie mathématique -
UE Analyse et synthèse d'images Vision par ordinateur et apprentissage - Synthèse d'images et réalité virtuelle -
UE Traitement d'images Représentation et filtrage numérique 1D/2D - Restauration d'images -

Semestre 4

UE Sciences de l'image Vision par ordinateur avancée - Synthèse d'images avancée - Morphologie et Topologie discrète avancée -
Stage
UE disciplinaire
Choix de 2 ECUE parmi 4 General Purpose Graphic Processing Unit - Animation et simulation - Géométrie différentielle discrète - Architectures et Programmation parallèle pour l'Image -