



Master Optique, Image, Vision, Multimédia Parcours Imaging and Light in Extended Reality (IMLEX)

Diplôme Master

Domaine d'étude Sciences, Technologies, Santé

Parcours Imaging and Light in Extended Reality (IMLEX)

Objectifs

The multidisciplinary IMLEX programme brings together image conversion, lighting and computer science. The objective of the programme is to train experts who in addition to a solid theoretical understanding of virtual reality will also possess strong practical skills in virtual reality applications. Students on the IMLEX programme will benefit from European research expertise combined with Japanese expertise in research addressing virtual reality and robotics.

The European Commission and the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) have selected IMLEX as one of the first Erasmus Mundus Master Joint Degree Partnerships with Japan.

Pour qui ?

Conditions d'admission

Bachelor's degree in Computer Science, Information Technology, Electrical Engineering, Photonics, or in a closely related field.

Et après ?

Poursuite d'études

The master programme qualifies the postgraduate for PhD studies.

Débouchés

The Imaging and Light in Extended Reality master course is designed to address industries' needs and challenges. It also opens up for international and challenging career opportunities, since on the international job market, the demand for postgraduates in computer vision, imaging science, computer science and XR technologies as well as basic and applied research is very high.

Postgraduates will be qualified to work in any enterprise that uses digital media tools and systems, such as the imaging industry, the mobile industry, or the gaming industry.

Below are some examples of future career prospects: Scientific advisor, chief scientist, R&D coordinator, research engineer, consultant, technical business development manager/director, technology manager.

Programme

| M1 - SEMESTER 7 - Fundamental Courses | Credits |
|---|----------------|
| UE 1 - Photonics and Optics Fundamentals | 4 |
| UE 2 - Design and Analysis of Algorithms | 4 |
| UE 3 - Robotics and XR | 4 |
| UE 4 - Physical Optics | 4 |
| UE 5 - Eye Tracking | 4 |
| UE 6 - English or Japanese or national language | 2 |

| M1 - SEMESTRE 8 - Computational Imaging | Credits |
|--|----------------|
| UE 1 - Real-time 3D Visualization | 5 |
| UE 2 - Real-time processing of Image with GPU | 5 |
| UE 3 - Complex Computer Rendering Methods in Real Time | 6 |
| UE 4 - Machine Learning: Fundamentals and Algorithms | 5 |
| UE 5 - Deep Learning and Computer Vision | 6 |
| UE 6 - English or Japanese or national language course | 3 |

| M2 - SEMESTER 9 - Specializations | Credits |
|---|----------------|
| UE 1 - Data Science and Analysis | 4 |
| UE 2 - Advanced Research Methods | 6 |
| UE 3 - Japanese Culture and Society | 4 |
| UE 4 - Case Study in Imaging and Light and XR | 6 |

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| UE 5 - Japanese Industrial Technologies and Innovations | 2 |
| UE 6 - 3D Vision Computation | 4 |
| UE 7 - Robotic Perception and Human-robot Interaction | 4 |

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| M2 - SEMESTER 10 - Master's Thesis | Credits |
| UE 1 - Internship | 30 |

Coût de l'inscription



8000€