



ACCREDITATION

The MSc in Eco-Design and Advanced Composite Structures (EDACS) is accredited by the Ministry of Higher Education, Research and Innovation.

National Accreditation Reference: 20150363-1502858J.

Co-accredited with the University of Lille (U-Lille, Hauts de France).
In partnership with Institut Mines-Télécom Business School in Evry.

KEY WORDS

Composites, Design, Industry, Materials Science, Performance, Transportation, Environment, Smart Materials, Computer-aided design, Management, Communication, Entrepreneurship, Innovation and Project Management

SCHOOL OFFERING THE MASTER

IMT Lille Douai is a Graduate School of Engineering of Institut Mines-Télécom, the leading group of public Engineering and Management graduate schools in France. IMT Lille Douai has also built a strong partnership with the University of Lille whose research activity is supported by 25 internationally renowned laboratories. IMT Lille Douai trains engineers who will take responsibilities in key sectors of the industry and researchers who will conduct international research in labs around the world.

LOCATION

IMT Lille Douai is located in the heart of Europe and is composed of 3 main campuses in Lille, the regional capital, and Douai. The MSc students will study in Douai, which is 20 minutes by train. Lille came up as the number one city to live in France, being one of the youngest cities, with more than 100,000 students. From there, you can jump on a train and be in a European hub in a couple of hours.

STRONG POINTS OF THE SCHOOL

IMT Lille Douai is a major educational player in today's industrial, digital, ecological and energy transformation, offering a wide range of undergraduate, graduate and postgraduate studies.

The international rise of the school is based on 5 strong points:

- > Conducting world-class research;
- > Offering high-level training;
- > Acting as a major stakeholder at the service of territories and companies;
- > Working with an international team committed to increase the reputation of the school worldwide;
- > Being the most digitally-focused engineering school in the region.

INDUSTRIAL PARTNERS

Decathlon, Alstom, SNCF, Airbus, Faurecia, Plastic Omnium, Arkema, IDI, Owens Corning, Total...

LANGUAGE OF TEACHING

The programme is fully taught in English.

ENVIRONMENT

The composite industry is an highly-technical and innovative sector on the rise, sensitive to the ecological transition. Its main concern is to control its life cycle and environmental impact to continue its exponential growth.

By adding to the respective qualities of several constituents, the overall performance of composite materials is significantly improved. It is therefore not surprising to see their rapid growth to meet current challenges, for example to reduce the weight of

vehicles, disability inclusion but also the improvement of sports equipment.

COURSE AIMS

The Eco-Design and Advanced Composite Structures MSc enables students to develop extensive experience in composites, especially sought-after in this highly-technical industry. The courses provided in this master's degree are directly associated with the industrial issue.

Students from the Eco-design and Advanced Composite Structures MSc are project-focused. Our laboratories bring together the technical resources required to allow students to experience, on a real-world scale, composite development: technological platform, computing and calculation resources, cluster computing, etc.

PROGRAMME

This is a full-time, two-year course divided into four semesters.

Semester 1:

- > Material structure and Characterisation
- > Structural composite manufacturing
- > Eco-design principles and Numerical design
- > Innovation project
- > Smart and Advanced materials
- > French as a foreign language

Semester 2:

- > Managerial finance
- > Business ethics
- > Intellectual property
- > Supply chain and Logistics
- > Sales and Business development
- > Personal development
- > Business plan challenge
- > AI and Entrepreneurship
- > French as a foreign language

Semester 3:

- > Mechanics of composites and Sandwich structures
- > Non-destructive evaluation and Mechanical characterization
- > Composite process modelling project
- > Modeling of materials for efficient design
- > Additive manufacturing and Prototyping
- > Laser processes in the composite industry
- > Research project
- > French as a foreign language

Semester 4:

During this semester, students will carry out their final-year internship in France or abroad, to apply the theoretical and technical concepts and methods to the industry. It can also be a research project in a laboratory.

Upon completion of the four semesters, students defend their Master Thesis.

ADMISSION REQUIREMENTS

The master's degree is open to candidates with at least a scientific Bachelor's degree in Science, Technology or Engineering and an interest in the academic topics offered by the Master's course.

ECO-DESIGN AND ADVANCED COMPOSITE STRUCTURES

MASTER OF SCIENCE



LANGUAGE REQUIREMENTS

English

To apply, candidates must have a proof of proficiency in the English language equivalent to a B2 level.

- > Bachelor degree taught in English
- > Official English Language qualification such as:
 - > TOEFL: 550/677 (Paper-based) or 79/120 (Internet-based)
 - > IELTS: 5.5/9
 - > TOEIC: 750/990
- > Cambridge: CAE (Certificate of Advanced English)

French

French language skills are not required to join the course. French lessons are included in the curriculum during the 3 academic semesters, in order to ease your immersion in the local life and offer you the opportunity to reach a position in France for your last-year internship or first job.

APPLYING

Request your application form by email:

international-admissions@imt-lille-douai.fr

COMPETENCES ACQUIRED

During this MSc programme, you will acquire hard and soft skills that are required to either occupy a decision-making role and a management position within public and private industries, or conduct research in the international community.

- > Acquire knowledge on the different composite components, structures and specificities;
- > Understand the composites manufacturing properties and processes to correctly select cost effective manufacturing techniques, tools and parameters;
- > Define a complete book of requirements involving the entire part life cycle (technical, economic and environmental aspects);
- > Lead an innovative project involving composite materials, from the idea to the transfer to production;
- > Coordinate and manage a team (R&D, designers, production...) and organize the complete value chain (designer, material and tool supplier, producer, distributor...).

TYPICAL JOBS

- > Design Manager
- > Design Director
- > Development Project Manager
- > Development Project Director

COST

- > €9,000 per year

SCHOLARSHIPS

Scholarships from the Governments and various organisations may be available depending on the student's academic records and country of origin. It should be mentioned that internships are paid and cover living expenses during the last semester.

DURATION

The programme lasts for 2 years. There is only one intake per year in September.

- > **Year 1:** First academic semester in Douai, second semester in Evry at IMT Business School
- > **Year 2:** One academic semester in Douai + 6-month Master thesis in industry or in a research lab.

LODGING

IMT Lille Douai holds 3 students' residences in Douai for admitted students. Single bedrooms are available in these residences with a common canteen.

In Evry, a large range of accommodation including small apartments, is available in a students' residence called "Maisel".

Students will have also access to the numerous university restaurants where meals are cheap (€3.25), various and convenient.

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SCHOOL CONTACTS

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