

These specialized training courses lead to a high level of expertise, recognized in the industry and research. They are specifically designed for students looking to develop a career in an international environment. Most of our programs are fully taught in English. The full-time 18 to 24-month programs include a 6-month paid internship in industry or research. They are open to candidates with a first-class Bachelor's degree and an outstanding academic record.

Masters of Science programs are nationally accredited programs. Holders of one of our MSc Degrees are fully entitled to enroll in doctoral studies in France or abroad.

MSc CGE is a degree delivered by a school member of the "Conférence des grandes écoles" as part of an accredited programme. Only schools who are members of the "Conférence des grandes écoles" are entitled to use this label, and only for the course(s) for which it has been granted.



ENERGY & ENVIRONMENT

- > **Biomass and Waste for Energy and Materials** (IMT Mines Albi)
- > **Damage: Disaster Management and Environmental Impact**
(IMT Mines Albi)



HEALTH

- > **Advanced Pharmaceutical Engineering** (IMT Mines Albi)



INDUSTRIAL ENGINEERING

- > **Management & Optimization of Supply Chains and Transport**
(IMT Atlantique)
- > **Project Management for environmental & energy engineering**
(IMT Atlantique)
- > **Management of international Lean and Supply Chain projects**
(IMT Mines Albi)



INFORMATION & COMMUNICATION TECHNOLOGY

- > **Data Science and Engineering** (Eurecom)
- > **Digital Security** (Eurecom)
- > **Internet of Things** (Eurecom)
- > **Mobile Computing Systems** (Eurecom)
- > **Architecture and Engineering for the internet of Things**
(IMT Atlantique)
- > **Communication System and Network Engineering** (IMT Atlantique)
- > **Data Science** (IMT Atlantique)
- > **Information System Governance** (IMT Atlantique)
- > **Computer Science for Communication Networks** (Télécom SudParis)
- > **Data Analysis and Pattern Classification** (Télécom SudParis)
- > **Electronique & Optical Engineering** (Télécom SudParis)



MATERIALS

- > **Aerospace Materials** (IMT Mines Albi)



NUCLEAR ENGINEERING

- > **Advanced Nuclear Waste Management** (IMT Atlantique)
- > **Nuclear Energy Production & Industrial Applications** (IMT Atlantique)
- > **Sustainable Nuclear Engineering - Medical Applications**
(IMT Atlantique)

BIOMASS AND WASTE FOR ENERGY AND MATERIALS

MASTER OF SCIENCE

ACCREDITATION

Master submitted to the French Ministry of Higher Education and Research for accreditation. Expected opening in September 2016.

KEY WORDS

Renewable feedstocks, eco-technology, processing, design, assessment, environmental burdens, green business, social responsibility

SCHOOL PROPOSING THE MASTER

Mines Albi, in co-accreditation with Institut Mines-Télécom, Paris, France

LANGUAGE OF TEACHING

English.

INCENTIVE

Given the current context of natural resource depletion, environmental and public health crises related to air and water pollution, pressures on energy supplies, we are facing a paradigm shift. The linear model “take, make, consume and dispose” is progressively being replaced by a 4R approach “repair, refurbish, reuse and recycle”. The circular economy is becoming day after day a new development strategy for nations. Better eco-design, waste prevention and reuse bring significant net savings for businesses, while also reducing environmental harm and bringing new job opportunities. Turning biomass and waste into a valuable resource is at the heart of this strategy. Generating new materials, processes and markets requires global high-level training, including science, technology, regulatory knowledge, management and economics. All these innovative systems will emerge at the crossroads of process engineering, chemistry, fluid mechanics, thermal science, environmental sciences and economics as well as social sciences and humanities. BiWEM was created to satisfy the growing needs of this dynamic sector.

COURSE AIMS

The objectives of BiWEM are to provide students with a sound theoretical and practical specialised knowledge in the field of biomass and waste processing. Students in the program will acquire the ability to design economically viable biological or thermochemical processes for the conversion of biomass and waste into new materials or energy carriers, within a sustainable development frame. Consequently, BiWEM focus on chemical engineering but also includes courses on economics, international regulations and on certain areas of the social sciences and humanities.

PROGRAM

This is a full-time program of 2 years divided into four semesters: lectures, tutorials and practical work over the 3 academic semesters followed by an internship of one semester in a company or in a public research lab. The program is composed of five teaching blocks, including an integrated team project over the three academic semesters under the supervision of expert practitioners. During the 6-month MSc thesis, students have the opportunity to consolidate and improve the knowledge and the skills being taught. Students are supervised by a tutor from the host organization and by a senior lecturer from Mines Albi. Thesis is concluded by the preparation of a final report and an oral dissertation in front of a jury.

1. Environmental and social economic issues (26 ECTS)

- > Ethics, management and economics of the environment
- > Corporate social responsibility
- > Ecotechnologies and innovation
- > Global environmental business

2. Fundamental science and generic engineering tools (20 ECTS)

- > Fundamentals of transport phenomena, applied chemistry, biochemistry, metabolic pathways
- > Generic numerical and experimental methods for process optimization and engineering
- > Process modeling, integration and assessment

3. Fundamentals for renewable resource conversion (22 ECTS)

- > Resource availability, collection and sustainability
- > Biomass and waste pre-processing
- > Fundamentals of biological and thermochemical reactor design
- > Gas and solid coproducts post processing

4. Putting theoretical concepts into practice (22 ECTS)

- > Industrial visits
- > Industrially-relevant project work, sponsored by industrial partners: Environmental-friendly design of an economically viable processing route for turning waste or biomass into energy, chemical or useful material.

5. MSc Thesis (30 ECTS)

- > 6-month MSc thesis in industry or in a public research lab, in France or abroad.

LOCATION

The 3 academic semesters will be held on the Mines Albi campus. Albi is located 70 km from Toulouse, the capital city of the French southwestern Midi Pyrénées Languedoc Roussillon Region, which is ranked among the 12 most dynamic European Regions. The city of Albi is part of the UNESCO's World Heritage.

ADMISSION REQUIREMENTS

Participants must hold a Bachelor of Science or Engineering degree, in the field of chemical engineering, clean technology, mechanical engineering, energy. Participants with some industrial experience are also welcome.

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
- > Bachelor degree taught in English or
- > English language qualification such as
 - TOEFL IBT 80,
 - IELTS 6.0,
 - TOEIC 750,
 - Cambridge CAE.

French

No prerequisite in French, but TEF II or equivalent may be required to obtain a visa.

BIOMASS AND WASTE FOR ENERGY AND MATERIALS

MASTER OF SCIENCE

APPLYING

All applications should be made on-line:

www.mines-albi.fr/biwem

Applications are open from January to June each year.

HIGHLIGHTS

- > Program boosted by the research department RAPSODEE CNRS UMR 5302 having an outstanding international recognition. This centre has been granted by the French government as a research centre of excellence in Science for Energy Conversion (under Labex and Equipex funding schemes). This label is given to only 10% of the research labs in France. RAPSODEE has also developed and hosts the Springer peer-reviewed journal "Waste and Biomass Valorization" and the WasteEng Conferences Series.
- > Strong interaction with industry through conferences, practices and visits. RAPSODEE works closely with more than 50 companies, including world leaders in the field of Energy and Environment.
- > Good grounding in a core set of engineering competencies.
- > In-depth knowledge of the key crosscutting methods associated with process design and integration.
- > Access to impressive and up-to-date onsite pilot-scale facilities.
- > Opportunity to undertake an industrially- relevant project, sponsored by companies, and to develop a sense of decision-making.
- > 6-month MSc thesis in industry or in a public research lab.
- > A quality charter to welcome international students to the Mines Albi international campus.
- > Courses taught entirely in English and in small groups.
- > Free French language courses.

SKILLS ACQUIRED

- > Ability to use state of the art, sciences, technology, business model and regulatory aspects to conceive and develop processing routes for waste and biomass valorization.
- > Ability to use experimental and numerical methods for process conceptual and detailed design, optimisation and assessment.
- > Ability to think green, preferably with a circular economy mind-set.
- > Ability to understand, analyse and manage complex systems.
- > Ability to recommend strategies to meet business and ecological goals.
- > Ability to undertake socially responsible innovative industrial projects.
- > Ability to work well with others, across culture and disciplines.
- > Ability to present convincingly and argue a case in front of an audience, write reports, publications and short communications.

TYPICAL JOBS

- > R&D Engineer
- > Junior Project Engineer
- > Process Engineer
- > Design Engineer
- > Exploitation engineer
- > Environmental consultant

COST

18,000 € for the complete MSc. program (4 semesters, 120 ECTS)

SCHOLARSHIP

Scholarships are available depending on academic results and countries of origin (companies, governments, embassies...). Internships are paid and cover living expenses during the last semester.

LODGING

Individual furnished studio apartments are available for international students during their stay. The residences are on the school campus or in downtown Albi and offer comfort and facilities to the students. Living expenses are quite low in Albi compared to other locations in France. Accommodation at the students' Residence costs about € 330 per month. The total living expenses should not exceed € 6,000 per year (on campus food and accommodation).

CALENDAR

One intake per year (mid-September).

- > **Year 1:** Two academic semesters at Mines Albi.
- > **Year 2:** One academic semester at Mines Albi + a 6-month MSc thesis, in France or abroad.

CONTACT

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Route de Teillet
81013 Albi cedex 09
France

website

www.mines-albi.fr/biwem

Email

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DAMAGE: DISASTER MANAGEMENT AND ENVIRONMENTAL IMPACT

MASTER OF SCIENCE

ACCREDITATION

Master accredited by the French Ministry of Higher Education and Research

KEY WORDS

Disaster Management, Environment, Impact Assessment, Emergency Medicine, Project Management, Human and Social Sciences, Information and Communication Technologies

SCHOOL PROPOSING THE MASTER

Mines Alès and Université de Nîmes

LOCATION

Two semesters will be held on the main campus of Mines Alès and at Université de Nîmes, in the Occitanie French southern Region. The Occitanie Region is known worldwide for its businesses and research clusters in aeronautical and space sectors in Toulouse (with headquarters of Airbus), Montpellier (the oldest Medical School in the world), Nîmes (famous for its cultural heritage).

STRONG POINTS OF THE SCHOOL/PROGRAM

- > Mines Alès is managed by the French Ministry of Industry
- > Université de Nîmes is accredited by the French Ministry of higher Education and research
- > Study in Alès and Nîmes, in the south east region of France,
- > International Faculty
- > Masters taught in English and in small groups
- > A 6-month master thesis in industry or in a research lab
- > Intercultural seminars
- > Free French language courses
- > A MSc program boosted by reputed research departments
- > An international team for international students
- > A quality-chartered "Welcome to International Students" package

COMPETENCE ACQUIRED

Knowledge in basic engineering and environmental science engineering with a particular attention for research applied to industry, economy and society.

Crisis management, coordination action and joint response planning by civil protection agencies and humanitarian operations.

LANGUAGE OF TEACHING

English

COURSE AIMS

The Master of Science DAMAGE serves as an interface between two fields of applications: disaster management and environmental impact assessment. This multidisciplinary approach will allow students to strengthen their knowledge base by integrating an international dimension on large-scale crises. The proposed courses will allow students to assess the risks (risk analysis methods), propose solutions for risk reduction and preparedness planning. At the end of the two academic years, students should be able to critically analyze the

- > different types of risks and their potential consequences.
 - > technical, human and organizational vulnerabilities
 - > human perception that influences the risk assessment
- They will be able to offer and professionally analyze the management and coordination in the event of human or environmental catastrophe.

PROGRAM

The organization of the teaching modules includes up to 120 ECTS credits over two academic years detailed as follows:

- > M1 year: UE1 - UE6
 - > M2 year: EU7 - EU10.
- A Master internship (6 months) represents 30 credits.

UE 1: Risk assessment methods

- > Principles and key concepts of Disaster management (risk reduction, response, mitigation, post catastrophe phase), risk (hazard, vulnerability and resilience)
- > Principles of consequence evaluation (natural hazards, environmental pollutions, technological risks, health)
- > Principles in vulnerability assessment and Geospatial analysis
- > Case study

UE2: Humanitarian emergencies

- > Principles in humanitarian emergencies
- > Principles in interdisciplinary aspects of Emergency in humanitarian disasters
- > Cultural, social and psychological aspects in Humanitarian Disasters
- > Humanitarian assistance : From theory to practice
- > Case study

UE3: Human and social sciences

- > Resilience of population in disaster situations
- > Theories and applied knowledge in psychosociology
- > Environmental psychology (relations between Human-Environment and stress)
- > Case study

UE4: Communication 1

- > Communication and team management
- > Foreign language course and European Culture

UE5: Emergency Medicine

- > Emergency medicine and public health (legal and ethical aspects)
- > Modeling medical disaster management
- > Principles of emergency medicine - Exercises & Drills

UE6: Information and communication technologies

- > Theories on Risk Communication
- > Communication strategies (public health communication)
- > Media training and drills
- > Case study

UE7: Telecommunications and organization

- > Heterogeneous organizations modeling
- > Innovative systems for telecommunications
- > Emergency communication systems

> Case study

UE8: Communication 2

- > Communication, team management and leadership
- > Foreign language course and European Culture

UE9: Project management

- > Planning and scheduling
- > Organization, Management
- > Computational applications

> Case study

UE10: Internship (6months- 30ECTS)

DAMAGE: DISASTER MANAGEMENT AND ENVIRONMENTAL IMPACT

MASTER OF SCIENCE

ADMISSION REQUIREMENTS

Applicants must hold a 4-year Bachelor of Science degree in the field of engineering (environmental sciences, logistics, and management) or sciences (chemistry, mechanics). Applicants with a first experience in industry are also eligible.

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
- > Bachelor degree taught in English or
- > English test such as
 - TOEFL IBT 80,
 - IELTS 6.0,
 - TOEIC 750,
 - Cambridge CAE.

No prerequisite in French

APPLYING

All applications should be completed on-line:

<https://msc.mines-telecom.asia>

Information can be requested at:

admission-damage@mines-ales.fr

Applications are open from January to June every year.

FEES AND POSSIBLE SOURCES OF FUNDING (FEES VALID FOR 2017 ENTRY)

Standard fees for 24 months are:

- > € 15,000 for non EU+student
- > € 10,000 for EU+students (member states of the European Union + Iceland, Lichtenstein, Macedonia, Norway and Turkey)

Grants as Partial fee waivers may be awarded depending on the quality of students files.

Some costs may be funded by certain French embassies or within the framework of agreements between certain international institutions.

Compulsory basic medical insurance is about € 215/year (covering 70% of medical treatment). An additional healthcare cover is strongly recommended for a remaining 30% (€ 200/year approx.)

HIGHLIGHTS

- > A 6-month MSc thesis in industry or in a public research lab.
- > A quality charter to welcome international students to Mines Alès international campus.
- > Masters taught entirely in English and in small groups.
- > Free French language courses.

CALENDAR

One intake per year (mid-September).

Year 1: Two academic semesters at Mines Alès.

Year 2: One academic semester at Mines Alès + a 6-month MSc thesis, in France or abroad.

LODGING

Individual furnished studio apartments are available for international students during their stay. The residences are on the school campus and offer comfort and facilities to the students. Living expenses are quite low in Alès compared to other locations in France. Accommodation at the students Residence costs about € 330 per month. The total living expenses should not exceed € 7,000 per year (on campus food and accommodation).

FOLLOW MINES ALES ON SOCIAL NETWORKS

Facebook EMAMasterDAMAGE

Twitter @MasterDAMAGE17

Youtube www.masterstudies.com/International-Master-DAMAGE-Disaster-Management-Environmental-Impact/France/EMdA/

CONTACT

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30319 Alès cedex
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mines-ales.fr/pages/master-damage-disaster-management-environmental-impact

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ADVANCED PHARMACEUTICAL ENGINEERING

MASTER OF SCIENCE

ACCREDITATION

Accredited by the French Ministry of Higher Education and Research.

Master n°20151034, Decree 2015, July 10. Extension for 5 years in progress (acquired)

KEY WORDS

Pharmaceutical Engineering, Management, Quality by Design, Lean management, Supply chain, Logistics, Industrial Engineering, Advanced Galenics, Advanced Pharmaceutical Technology, Generics, Biosimilars, Innovative drugs, Biotech, Nano...

SCHOOL PROPOSING THE MASTER

Ecole des Mines d'Albi – In co- accreditation with Institut Mines-Télécom, Paris - France

INDUSTRIAL PARTNERS

Pfizer, Glaxo Smith-Kline, Novartis, Eli-Lilly, Sanofi, Roche, Pierre Fabre, Servier, Fareva, Merck-Serono, Bristol- Myers-Squibb, Johnson & Johnson, LMSD (Merck & Co), L'Oréal, Chanel, Teva, Bayer-Schering, Astra-Zeneca, IPSEN, Novo Nordisk, Ethypharm, Clarins, Roullier Group, Ferring Pharmaceuticals, Bertin Pharma, Danone, Meda, Norgine, Corbion-Purac, ...

LANGUAGE OF TEACHING

English.

ENVIRONMENT

The pharmaceutical industry is traditionally located in the Triad countries (north america - US & Canada-, Europe, and Japan). But the fast growing Pharmerging markets has recently displayed strong growth and will worth 50% of the global pharmaceutical market in 2020, with an annual growth of 15% a year. Austerity measures across the world impose cutbacks on healthcare spending. But the rapidly changing technical, pharmaceutical, and life- science environment is a source of development for generic manufacturers and innovative medicine developers. Most pharmaceutical industries will have to adapt, improve and increase their production and supply chain systems, in accordance with the current international regulations, and to develop new drugs, dosage forms and medical devices, in line with the best world standards.

COURSE AIMS

ADPHARMING course offers challenging opportunities for students interested in developing a career in the pharmaceutical industry. ADPHARMING aims at developing a new kind of leaders with a global high- level training for R & D, drug production, quality management, lean management, logistics and supply chain, in the field of pharmaceuticals, cosmetics, biotechnology...

PROGRAM

This is a full-time program of 2 years divided into four semesters: lectures, tutorials and practical work over the 3 academic semesters, followed by a one semester internship in a company or in an academic research laboratory, in France or another country. During the 6-month MSc thesis, students have the opportunity to improve and use the skills and knowledges being taught. Students are supervised by a tutor from the host organization, and by a senior lecturer from Mines-Albi. The Master Thesis is concluded by the preparation of a final report and an oral dissertation in front of a jury.

First semester: Introduction, scientific and technological bases.

> Cultural and linguistic integration

> Introduction to the pharmaceutical industry
> Fundamental sciences for pharmacy
> Transport phenomena and Participants must hold a Bachelor of Science or Engineering degree with related major (Chemical Engineering, Chemical Sciences, Pharmaceutical Engineering, Pharmaceutical Sciences...) or an equivalent degree.

> thermodynamics
> Bases of the pharmaceutical engineering
> Initiation to the corporate world, visits
> Generic tools for engineering
> Project 1: Bibliography and presentation

Semester 2: Bases of pharmaceutical engineering, project and production management.

> Pharmaceutical engineering today
> Pharmaceutical engineering: process engineering, modelling.
> Project management
> Production management
> Supply chain management
> Lean management
> Eco-design, circular economy, innovation
> Control systems, sensors
> French culture and language
> Project 2: Research, modelling, industrial topics, innovation

Semester 3: Advanced Pharmaceutical Engineering.

> Specificities of international pharmaceutical companies
> Regulatory agencies Good Manufacturing Practices
> Mechanism of drugs action
> QbD, PAT
> Green processes for pharmacy
> Pharmaceutical processes & development.
> Pharmaceutical engineering: dosage forms, advanced and innovative galenics.
> Quality management system, QRM
> Pharmaceutical environment (clean rooms...)
> French culture and language
> Project 3: Research and/or industry oriented

Semester 4: MSc Thesis.

> 6-month MSc thesis in industry or in an academic research laboratory (France or international).

The program also includes companies & research centers visits, as well as seminars and international conferences

LOCATION

The three academic semesters will be held at Mines-Albi Campus. Albi is located in South-West France 70 km from Toulouse, at the heart of the new dynamic region Midi-Pyrénées Languedoc- Roussillon.

ADMISSION REQUIREMENTS

Participants must hold a Bachelor of Science or Engineering degree with related major (Chemical Engineering, Chemical Sciences, Pharmaceutical Engineering, Pharmaceutical Sciences...) or an equivalent degree. Participants holding a first industrial experience are also much welcome.

LANGUAGE REQUIREMENTS

English: B2 Level

> Mother tongue or
> Study in an English speaking country or • English Language Qualification
– TOEFL IBT 80
– ELTS 6.0
– TOEIC 750
– Cambridge CAE (Certificate of Advanced English).

ADVANCED PHARMACEUTICAL ENGINEERING

MASTER OF SCIENCE

French:

A good knowledge of French language is not mandatory before arrival in France, but TEF II or an equivalent level may be required to obtain a visa.

STRONG POINTS OF THE SCHOOL/ PROGRAM

- > International Faculty and Campus
- > Mines-Albi is accredited by the French Ministry of Economy, Industry and Numerics (Commission du Titre d'Ingénieur - CTI)
- > Mines-Albi is accredited by the French Ministry of Higher Education and Research (4 Masters, including ADPHARMING)
- > Masters taught entirely in English and in small groups
- > Taylor-made program adapted to various initial formations
- > Strong links and interaction with industries (projects, research programs, partnerships, internships...)
- > 1000 alumni (engineers and pharmacist-engineers) working in French & European pharmaceutical industry
- > 6-month master thesis in industry or/ and in a research lab
- > Master boosted by the research department RAPSODEE (CNRS UMR 5302) and its federative platform GALA (Advanced Galenics = Pharmaceutical Technology and Engineering) www.platforme-gala.com
- > Good grounding in a core set of engineering competencies
- > Access to impressive and up-to-date pilot-scale facilities
- > An international team for international students
- > A quality-chartered "Welcome to International Students" package
- > Free French language courses
- > Scholarships based on academic excellence are available for outstanding candidates

SKILLS ACQUIRED AND GLOBAL LEARNING OUTCOMES

Knowledge of state of the art specificities of the international pharmaceutical industry;

- > Advanced knowledge of state of the art specificities of the international regulations of pharmaceutical industry (GMP, PAT...), and the pharmaceutical quality;
- > In-depth knowledge of the drug life cycle ;
- > Ability:
 - to use state of the art sciences, technology and regulatory aspects to conceive and develop sustainably innovative drugs and advanced galenics.
 - to use process engineering to design pharmaceutical processes in a sustainable way;
 - to use project and lean management methods in the pharmaceutical and related fields.
 - to undertake complex projects as leader, animator and/or partner in an international team environment.
 - to develop a sense of responsibility, including social, and of decisionmaking.
 - to develop the ability to work in an international context: fluency in English, cultural and international awareness, knowledge of French culture and language.
 - to communicate efficiently with written reports and by oral presentation.

TYPICAL JOBS

- > The master ADPHARMING provides the opportunity to enter a high-level career in the pharmaceutical industry or to continue for the preparation of a doctoral thesis
- > R&D engineer / manager in advanced galenics
- > Formulation project leader
- > Quality system manager
- > PAT project manager
- > Pilot Plant manager
- > Plant performance & process excellence manager
- > Plant manager
- > Auditor, Consultant or Expert in the field
- > Production Planner, Production Analyst
- > Deputy Head of Bioproduction
- > Lean project manager or leader
- > Supply chain manager
- > QA - Supplied Materials manager
- > Technology transfer manager/ supervisor
- > Interface big pharma/ academic partner/ biotech start-up

COST

9,000 euros per year
Possible payment by installments

SCHOLARSHIP

Scholarships are available depending on academic records and countries of origin (companies, governments, sponsors, embassies...). Internships are paid and cover living expenses during the last semester.

CALENDAR

One intake per year in September.

- > **Year 1:** Two academic semesters at Mines Albi.
- > **Year 2:** One academic semester at Mines Albi + a 6-month Master thesis in industry and/or in a research lab (France or International)

LODGING

Individual furnished studio apartments are available for international students during their stay. The residences are located in Albi (our campus and city center) and offer all the comfort and facilities to the students. Living expenses are quiet low in Albi compared to other locations in France. Accommodation at the students' Residence : about 330 Euros per month. The total amount should not exceed 6,000 Euros per year (on campus food and accommodation).

CONTACT

Mines Albi - International students office
Campus Jarlard - Route de Teillet -
81013 Albi cedex 09
France

Our knowledgeable staff will be happy to assist with any inquiries you may have.

www.mines-albi.fr/adpharming

www.mines-albi.fr/admissionprocess-master-science

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MANAGEMENT AND OPTIMIZATION OF SUPPLY CHAINS & TRANSPORT

MASTER OF SCIENCE

ACCREDITATION

This MSc in Management and Optimization of Supply Chains & Transport (Most) is accredited by the French Ministry of Higher Education & Research.

National Accreditation Reference: 1601034E

Mention

Management of Production, Logistics and Procurement

KEY WORDS

Supply Chain, Logistics, Management, Optimization, Transport, Industrial Engineering, Engineering Management.

SCHOOL OFFERING THE MASTER

IMT Atlantique, a «Grande Ecole» which is part of the Institut Mines-Telecom, a leading French higher Education and Research Institution in Engineering, with 12,500 students.

LOCATION

This MSc program is offered on Nantes campus. Nantes is France's sixth-largest city and capital of the third-largest industrial region. Nantes lies just 50 km from the Atlantic coast; Paris is 2 hours away by high-speed train. Nantes is a dynamic city, which has been frequently recognized for its quality of life. The campus provides all the students facilities: student's residence, sports facilities, wireless network, library, associations, etc.

INDUSTRIAL PARTNERS

Airbus, Dachser-Graveleau, GE Healthcare, Ernst&Young, Thales Avionics, EuroDecision...

LANGUAGE OF TEACHING

100% English

ENVIRONMENT

Supply Chain management is concerned with the global management of physical, information flows for the elaboration of products, going from raw materials and suppliers through the production and distribution system down to the final consumers. Transport activities play also a key role in the organization of the system. The design, planning and optimization of global supply chains and their components (procurement, production, distribution and transport) have become a key factor of performance competitiveness for companies of all sectors in the increasingly competitive global economy. The program covers the logistics activities of companies in the productive sectors as well as in the service activities.

COURSE AIMS

The MSc MOST aims to give a competitive edge to students and young professionals interested in industrial engineering and engineering management with a high emphasis on quantitative methods for decision making in the field of supply chain and transport management and optimization.

PROGRAM

Scientific and technical modules:

- > Production and Operations Management
- > Operations Research
- > Decision making with uncertainty and Simulation
- > Supply Chain performance methods & Evaluation
- > Supply Chain design & support
- > Supply Chain and transport planning and optimization
- > Planning and scheduling of production and services

Management modules:

- > Introduction to Supply Chain Engineering and Management
- > Strategy and Project Management
- > Economics, Marketing, Finance and Organization
- > Purchasing, E-business & Innovation
- > Supply Chain Information systems and technologies

Company visits, Scientific seminars, Technical projects, Generic methods for Engineers, French language & culture

Professional coaching (Student centred process of reflection on competencies and professional objectives)

- > 6-month MSc thesis in Industry or research lab

ADMISSION REQUIREMENTS

The international MSc in MOST is open to candidates with a Bachelor of Science degree in any major [Industrial Engineering, Mechanical, Applied Mathematics...] or a Management or Economics degree with strong emphasis on quantitative techniques.

Possible admission into the 2nd Year of the Master for the students who already have a Master degree in Industrial Engineering.

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
- > Bachelor degree taught in English or
- > English test such as TOEFL IBT 80, IELTS 6.0, TOEIC 750, Cambridge

No prerequisite in French

APPLYING

Apply at

<https://most.imt-atlantique.fr>

Applications are opened from October to May each year.

STRONG POINTS OF THE SCHOOL

- > MSc accredited by the Ministry of Higher Education and Research
- > International Faculty
- > Masters taught entirely in English and in small groups
- > Strong links with the industries
- > 6-month master thesis in industry or in a research lab
- > European track possibility
- > Intercultural seminars
- > Free French language courses
- > Master boosted by a research department
- > An international team for international students
- > A quality chart to welcome international students
- > Nantes airport/train station pick up
- > Accommodation available on campus
- > Scholarship based on excellence.
- > French Summer School program in July and August for students who wish to improve French language and culture skills.

MANAGEMENT AND OPTIMIZATION OF SUPPLY CHAINS & TRANSPORT

MASTER OF SCIENCE

COMPETENCES ACQUIRED

- > The high-level technical and management skills necessary for the management of supply chains and logistics and transport systems for the productive or service sectors;
- > An advanced training in Operations Research and Decision-making techniques applied to supply chain management;
- > An in-depth knowledge of industrial systems operations management, production, transport and logistics in all sectors of economic activity;
- > The ability to manage complex innovative projects in an international environment;
- > The opportunity to put into practice the theoretical concepts in a real industrial environment or conduct a research project aimed at developing innovations in the area;
- > The chance to learn the French language and acquire the French culture;
- > The opportunity to enter a high-level carrier in industry or to continue for the preparation of a doctoral thesis.

TYPICAL JOBS

- > Supply Chain Manager
- > Supply Chain Consultant
- > Consultant or expert in optimization for supply chain or transport systems
- > Planner, Analyst
- > Production Planner, Production Analyst
- > Project Manager for supply chain development
- > Purchaser / Buyer

COST

Participation cost: 12 000 € / year

SCHOLARSHIPS

Special rates for :

- > European students from the Erasmus zone (6 000 € / year)
- > EU Graduate students from our partner universities (3 000 € / year)
- > EU students met at Education fairs (5 400 € / year)
- > excellent EU applications or recommended EU applications (2 600 € / year)
- > Non-EU students graduated from our partner universities (6 500 € / year)
- > Non-EU students met at Education fairs (9 600 € / year)
- > Non-EU Excellent applications or recommended applications (6 000 to 9 000 € / year)
- > Double-Degree students (4 500 € / year)
- > Possible Industrial sponsorship.

CALENDAR

One intake per year in September.

Year 1: Two academic semesters on Nantes campus

Year 2: One academic semester on Nantes campus + 6 month Master thesis in industry or in a research lab.

Possible exchange semester at an international partner university.

LODGING

The student's residence (called «MDE») located on campus offers furnished individual rooms. They are 18m2 and equipped with a private bathroom and a small kitchen.

Some rooms for couples are also available. The standard size is 30m2, including a living room and a separate bedroom.

housing-nantes@imt-atlantique.fr

FOLLOW IMT ATLANTIQUE ON SOCIAL NETWORKS

Facebook IMTAtlantique

Twitter @IMTAtlantique

Instagram @imt_atlantique

DETAILS OF SCHOOL

IMT Atlantique
Nantes Campus
La Chantrerie
4 rue Alfred Kastler
CS 20722
44307 Nantes cedex 3
FRANCE

www.imt-atlantique.fr

Email: most-admission@imt-atlantique.fr

Phone: +33 2 51 85 81 32

PROJECT MANAGEMENT FOR ENVIRONMENTAL & ENERGY ENGINEERING

MASTER OF SCIENCE

ACCREDITATION

The MSc in Project Management for Environmental & Energy Engineering (PM3E) is accredited by the French Ministry of Higher Education & Research.

National Accreditation Reference: 1702350F

Co-accreditation with University of Nantes for a specialization in Microalgae Bioprocess Engineering, and with ONIRIS for a specialization in Project Management for food factories of the future.

Mention

Process and Bioprocess Engineering

KEY WORDS

Environment, Energy Systems, Sustainability, Resource Management, Environmental Process Engineering, Renewables, Energy Efficiency, Project Management.

SCHOOL OFFERING THE MASTER

IMT Atlantique, a «Grande Ecole» which is part of the Institut Mines-Télécom, a leading French higher Education and Research Institution in Engineering, with 12,500 students.

LOCATION

This MSc program is offered on Nantes campus. Nantes is France's sixth-largest city and capital of the third-largest industrial region. Nantes lies just 50 km from the Atlantic coast; Paris is 2 hours away by high-speed train. Nantes is a dynamic city, which has been frequently recognized for its quality of life. The campus provides all the students facilities: student's residence, sports facilities, wireless network, library, associations, etc.

INDUSTRIAL PARTNERS

Alstom, Total, Arcelor Mittal, Technip, Veolia...

LANGUAGE OF TEACHING

100% English

ENVIRONMENT

Nowadays, globalization, energy and the environment represent the primary theme on which many countries are focusing. One of the main challenges humanity will have to face tomorrow will be to master its energy use and supply, together with a sustainable use of its natural resources and environmental quality. While energy and environment problems used to be mostly considered as local and independent (e.g. local pollutions due to effluent emissions – local resources exploitation) they are now increasingly considered to be regional and global issues (e.g. acid rain, transboundary impacts of energy use, the greenhouse effect etc.). Therefore there is a growing need for specialists able to understand both energy and environmental problems. Such problems have now become major political issues and the subject of international debate and regulation. Energy and environmental problems are no longer isolated issues which can be dealt with in each country or region independently from the others.

On the contrary, they are internationally shared topics which require multi-nation analysis and solutions. It is thus fundamental that future specialists have an international perspective and have studied in a multicultural program.

COURSE AIMS

The objective of the Master of Science is to train project leaders or supervisors capable of managing complex engineering projects in the domain of the environment and energy (conversion systems, energy policy and energy efficiency) within an international context. The MSc PM3E offers a balanced program of management skills and engineering techniques for environmental and energy projects. The technical part of the course concentrates on technology and process engineering as well as process modeling, simulation and control. A significant part of the program is also devoted to social sciences for project managers.

PROGRAM

Scientific and technical modules:

- > Transfer phenomena
- > Introduction to Energy & Environmental issues
- > Environment and process engineering
- > Incineration and Waste Minimization
- > Air and soil remediation
- > Water Treatment Processes
- > Water strategies and innovation
- > Process modeling, simulation and control
- > Thermodynamics for Energy systems
- > Renewables
- > Energy systems
- > Energy efficiency and services
- > Energy networks
- > Energy modeling and Optimization

Social Science and Management modules:

- > Project management,
- > Energy management

Company visits, Scientific seminars, Technical projects, Generic methods for Engineers, French language & culture

Professional coaching (Student centred process of reflection on competencies and professional objectives)

- > 6-month MSc thesis in Industry or research lab

ADMISSION REQUIREMENTS

Bachelor degree in Engineering or Science in Chemical Engineering, Mechanical Engineering, Environmental Engineering or Energy Engineering... or an equivalent degree. Possible admission into the 2nd year of the Master for the students who already have a Master degree (year 1) or at least a four-year university degree in Environment (process Engineering applied to air, water, waste)...

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
- > Bachelor degree taught in English or
- > English test such as TOEFL IBT 80, IELTS 6.0, TOEIC 750, Cambridge

No prerequisite in French

APPLYING

Apply at

<https://pm3e.imt-atlantique.fr>

Applications are opened from October to May each year.

PROJECT MANAGEMENT FOR ENVIRONMENTAL & ENERGY ENGINEERING

MASTER OF SCIENCE

STRONG POINTS OF THE SCHOOL

- > MSc accredited by the Ministry of Higher Education and Research
- > International Faculty
- > Masters taught entirely in English and in small groups
- > Strong links with the industries
- > 6-month master thesis in industry or in a research lab
- > European track possibility
- > Intercultural seminars
- > Free French language courses
- > Master boosted by a research department
- > An international team for international students
- > A quality chart to welcome international students
- > Nantes airport/train station pick up
- > Accommodation available on campus
- > Scholarship based on excellence
- > French Summer School program in July and August for students who wish to improve French language and culture skills.

COMPETENCES ACQUIRED

- > A strong scientific background and technical knowledge in environmental and energy processes
- > A good know-how in process modeling and simulation
- > Cross-disciplinary management skills essential to set up and pilot projects in an international context
- > A significant grounding of social sciences for engineers

TYPICAL JOBS

- > **Project engineer** - Is involved in projects of construction or improvement of industrial units, design and optimization of clean manufacturing processes, pollution, waste and water treatment facilities, energy conversion and distribution systems.
- > **Exploitation or production engineer** - Runs and manages an industrial production unit at different levels (technical, financial, human, regulatory); coordinates and implements environmental management activities of the firm.
- > **Business or consultant engineer** - Assesses new markets and develops new activities for firms at an international level, carries out audits and consultancy for industry, especially for sustainability and transfer of new technologies.
- > **Research & Development** - Designs, carries out experimental studies, develops models and simulates innovative processes applied to air, water, waste treatments or energy production.

COST

Participation cost: 12 000 € / year

SCHOLARSHIPS

Special rates for :

- > European students from the Erasmus zone (6 000 € / year)
- > EU Graduate students from our partner universities (3 000 € / year)
- > EU students met at Education fairs (5 400 € / year)
- > excellent EU applications or recommended EU applications (2 600 € / year)
- > Non-EU students graduated from our partner universities (6 500 € / year)
- > Non-EU students met at Education fairs (9 600 € / year)
- > Non-EU Excellent applications or recommended applications (6 000 to 9 000 € / year)
- > Double-Degree students (4 500 € / year)
- > Possible Industrial sponsorship.

CALENDAR

One intake per year in September.

Year 1: Two academic semesters on Nantes campus

Year 2: One academic semester on Nantes campus + 6 month Master thesis in industry or in a research lab.

Possible exchange semester at an international partner university.

LODGING

The student's residence (called «MDE») located on campus offers furnished individual rooms. They are 18m2 and equipped with a private bathroom and a small kitchen.

Some rooms for couples are also available. The standard size is 30m2, including a living room and a separate bedroom.

housing-nantes@imt-atlantique.fr

FOLLOW IMT ATLANTIQUE ON SOCIAL NETWORKS

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Twitter@IMTAtlantique

Instagram@imt_atlantique

DETAILS OF SCHOOL

IMT Atlantique
Nantes Campus
La Chantrerie
4 rue Alfred Kastler
CS 20722
44307 Nantes cedex 3
FRANCE

www.imt-atlantique.fr

Email: pm3e-admission@imt-atlantique.fr

Phone: +33 2 51 85 81 50

MANAGEMENT OF INTERNATIONAL LEAN AND SUPPLY CHAIN PROJECTS

MASTER OF SCIENCE

ACCREDITATION

Accredited by the French Ministry of Higher Education and Research (Decree 20151032, 2015, July 10)

KEY WORDS

Supply Chain Management, Production, Logistics, Lean Management, Continuous Improvement, Project Management...

SCHOOL PROPOSING THE MASTER

Mines Albi, France
Toulouse Business School, France

INDUSTRIAL PARTNERS

Airbus, Bosch, Pierre Fabre, MBDA, Carrefour, Agilea, Thales, Poulit, Bernard Controls...

LANGUAGE OF TEACHING

English.

ENVIRONMENT

Supply Chain management is concerned with the global management of physical and information flows for the elaboration of products : from raw materials and suppliers through the production and distribution system down to the final consumers. Lean management deals with the continual removal of wastes in processes, with the aim of making them more efficient and responsive, thereby increasing the firm's competitiveness. In the globalized and complex world of today, a necessary and sufficient condition to achieve a high level of competitiveness is to train managers with multiple competencies. This is the reason why this MSc program is designed around three disciplines: supply chain management, lean management, and project management. It also adopts a professional approach by incorporating four international professional certificates.

COURSE AIMS

This MSc aims to give a competitive edge to students and young professionals willing to rapidly take up management positions in the fields of supply chain, operations, lean, and project management, in a global, multicultural and constantly evolving business environment.

PROGRAM

This is a two-year full-time program divided into four semesters: courses over 3 semesters followed by an internship of one semester in a company or in a research laboratory. The program is composed of 11 teaching units that include the preparation for 4 professional certificates (APICS's BSCM, PMI's CAPM, Yellow Belt in Lean-6 Sigma, and ISCEA's CDDP).

1. Managing Internationally and Responsibly

- > Cross-cultural management
- > Interaction processes in international team
- > Negotiation

2. International Growth Measurement and Marketing

- > Creation of value metrics
- > International Marketing Communications

3. Internationalization Process

- > Law related to international strategy
- > International entrepreneurial decisions

4. Supply Chain Management

- > Materials management
- > Basics of SCM (BSCM certification)
- > Principles of sourcing and procurement

5. Demand Chain Management

- > Sales forecasting
- > Distribution, Transportation, and Physical Internet
- > Closed-Loop Supply Chain

6. Lean Management

- > Business process management
- > Quality management
- > Lean-6 sigma (Yellow Belt certification)

7. Enterprise and Network Management

- > Accounting and Finance Management
- > Strategy and Marketing

8. Project Management

- > Basics of-project management (CAPM certification)
- > Collaborative project management

9. Decision Support Systems:

- > Quantitative models and simulation • Information systems
- > Demand-driven MRP (CDDP certification)

10. Personal Development

- > Communication and team management
- > Reflective and learning diary
- > Foreign languages and European culture

11. MSc Thesis

- > 6-month MSc thesis in industry or in research lab (France or international).

The program also includes company visits and seminars.

LOCATION

Most of the classes will be held on the main campus of Toulouse Business School, located in the center of Toulouse, the capital city of the French southwestern region of Midi-Pyrénées, ranked among the 12 most dynamic European regions and enjoys a very active and supportive framework. The Midi-Pyrénées is known worldwide for its businesses and research platforms in aerospace, agriculture and health sectors. Toulouse is the center of the European aerospace industry, with the headquarters of Airbus and many other aerospace companies. Toulouse is consistently ranked high in the cities in which students prefer to study (taking 2nd place behind Paris in 2014).

Some classes will be held on the campus of Mines Albi, located in Albi, a city 80 kilometers from Toulouse. Commuting between the two cities is quite easy and will be taken care of by the school. Albi city is part of UNESCO's World heritage.

ADMISSION REQUIREMENTS

Participants must hold a 3-year Bachelor of Science degree in any field (engineering, sciences, management, economics...). French candidates are expected to have an academic level that corresponds to the Licence (L3).

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
- > Bachelor degree taught in English or
- > English language qualification such as
 - TOEFL IBT 80,
 - IELTS 6.0,
 - TOEIC 750,
 - Cambridge CAE.

No prerequisite in French, but TEF II or an equivalent level may be required to obtain a visa.

MANAGEMENT OF INTERNATIONAL LEAN AND SUPPLY CHAIN PROJECTS

MASTER OF SCIENCE

APPLYING

All applications should be made on-line:

www.mines-albi.fr/miles

Applications are open from April to November each year..

One intake per year in January.

STRONG POINTS OF THE SCHOOL/ PROGRAM

- > Mines Albi is part of Institut Mines- Telecom, an institution under the authority of the Ministry of Industry
- > TBS is triple-accredited: AACSB, EQUIS, and AMBA
- > The MSc is accredited by the French Ministry of Higher Education and Research
- > 4 international certifications are included in the MSc
- > International Faculty
- > Masters taught entirely in English
- > Strong links with the industries
- > 6-month master thesis in industry or in a research lab
- > Intercultural seminars
- > Free French language courses
- > MSc boosted by reputed research departments
- > An international team for international students
- > A quality-chartered "Welcome to International Students" package

COMPETENCIES ACQUIRED

- > The high-level technical and management skills necessary for the management of supply chains, logistics and lean operations in the manufacturing or service industries
- > An advanced training in Operations Research and Decision-making techniques applied to supply chain management
- > An in-depth knowledge of industrial systems operations management, production, transport and logistics in all sectors of economic activity
- > The ability to manage complex innovative projects in an international environment
- > The opportunity to put into practice the theoretical concepts in a real industrial environment or conduct a research project aimed at developing innovations in the area
- > The opportunity to learn French and acquire some French culture
- > The opportunity to enter a high-level career in industry or to continue for the preparation of a doctoral thesis

TYPICAL JOBS

- > Supply Chain Manager
- > Supply Chain Consultant
- > Supply Chain Planner
- > Supply Chain Analyst
- > Lean Project Manager
- > Continuous Improvement Manager
- > Project Manager for supply chain development
- > Procurement or Purchasing Manager
- > Logistics Manager
- > Operations Manager

COST

20,000 € for the complete MSc program (4 semesters).

For European-Union students, it includes the enrollment fees for the 4 international professional certificates.

Non EU students will pay extra fees of 1,200 € for their enrollment in these certificates.

SCHOLARSHIP

Scholarships are available depending on academic records and countries of origin (companies, governments, embassies...). Internships are paid and cover living expenses during the last semester.

CALENDAR

One intake per year in January.

> **Year 1:** Two academic semesters at Toulouse Business School.

> **Year 2:** One academic semester at Toulouse Business School and 6-month Master thesis in industry and/or in a research lab.

CONTACT

TBS - International students office -

20, boulevard Lascrosse

31068 Toulouse cedex 7

France

Mines Albi - International students office

Campus Jarlard

Route de Teillet

81013 Albi cedex 9

France

website

www.mines-albi.fr/miles

Email

admission.miles@mines-albi.fr

Tel. +33 5 63 49 32 16



Institut Mines-Télécom

IMT
International Relations
37-39 rue Dareau
75014 Paris - France
international@imt.fr
www.imt.fr

ACCREDITATION

National Accreditation by the French Ministry of Education, Higher Education and Research.
The degree can lead to enrollment in a Phd program.

KEY WORDS

Big Data, Cloud Computing, Distributed Systems, Statistical Learning, Data Mining, Machine Learning, Optimization

STRONG POINTS OF THE PROGRAM

- > The teaching program benefits from a unique location and from the expertise of renowned industrial partners.
- > EURECOM is located in Sophia Antipolis, Europe's largest technology park, a hotbed of internships and jobs opportunities for students.
- > EURECOM is a consortium of leading international universities and top ICT companies and has established a synergy with the local industrial environment on advanced research topics.
- > During their Master, students will have access to cutting-edge technological platforms within EURECOM's Wireless Communications Laboratory.
- > Students are supervised by internationally renowned researchers.
- > A 6-month paid internship which provides a cutting-edge experience. EURECOM has its own database of internship offers in several countries.
- > A fully dedicated team providing administrative support to international students
- > A strong international exposure providing essential intercultural tools (only school in France with 2/3 of international students and professors)

SCHOOL OFFERING THE MASTER

EURECOM, a «Grande Ecole» with a 100% curriculum in English. It is located on the French Riviera, between Nice and Cannes. The degree is co accredited by IMT (Institut Mines-Télécom).

INDUSTRIAL PARTNERS

BMW Group, IABG, Orange, Monaco Telecom, SAP, ST-Microelectronics, Symantec.

LANGUAGE OF TEACHING

100% teaching in English. French is taught as a foreign language throughout the program. A 3-week program of intensive French language courses is organised in September.

ENVIRONMENT

The "Big Data" phenomenon is rooted in the field of data science and engineering, which aims at developing both computer and mathematical tools for data storage and processing. An increasing volume of data are daily produced by modern day industrial processes (in fields such as energy, intelligent transport systems, aviation industry and many others...), and fuelled by the rise of multimedia tools and the Internet of Things in our daily life.

The master in Data Science and Engineering aims at combining computer and statistical sciences to develop cutting-edge and fundamental tools to efficiently address applied issues related to data processing. Beyond its importance in scientific research and industry, data analysis helps develop methods, algorithms and software able to extract value out of huge masses of heterogenous data with several dimensions.

The curriculum offers a cohesive blend of technical classes in data mining, software engineering, distributed systems coupled with fundamentals in Business, Innovation and Project Management to develop profiles which are highly valued by corporate recruiters.

COMPETENCES ACQUIRED

- > Provide the theoretical background and the applied know-how to manage and improve large-scale distributed systems
- > Acquire tools and methods to develop algorithms of data analysis and conceive data storage and processing systems.
- > Develop an in-depth understanding of the fundamentals in other relevant fields such as: image and speech processing, semantic Web Technologies; communications and computer security...
- > Acquire managerial knowledge to provide and lead innovation in Business Intelligence and Data Analytics (Project Management, Organization, innovation management...)
- > Get an Introduction to advanced research topics

PROGRAM

The Master's program is a full-time program made of 3 semesters of courses followed by a 6-month Msc thesis in industry or in a research lab.

Scientific and technical modules

- > Distributed systems and cloud computing
- > Introduction to statistical learning
- > Operating systems
- > Fundamentals of Optimization
- > Mathematical methods for engineers
- > Algorithmic machine learning and data mining
- > Advanced Statistical Inference
- > Modern computer architectures
- > Secure Communications
- > Introduction to semantic Web Technologies
- > Speech and Audio processing
- > Cyber crime and Computer forensic
- > Distributed software and middleware
- > Software development methodologies
- > Information theory
- > Mobile application and services
- > Human Machine Interaction for the Web

Soft skills / management modules

- > Introduction to Management
- > Personal Development and new product development
- > Entrepreneurship and Capital Venture
- > Innovation and product development
- > Intellectual property Law
- > Sustainable ICTs
- > Business Simulation
- > Sociological approaches of Telecom
- > Technologies
- > General Introduction to Law: contracts, setting up business
- > Project Management

Also part of the program

- > Company visits and seminars
- > Scientific and Technical Projects
- > French language
- > Professional coaching (workshops on CV/professional interviews)
- > 6-month thesis in Industry or Research lab

DATA SCIENCE AND ENGINEERING

MASTER OF SCIENCE

ADMISSION REQUIREMENTS

- > a Bachelor's degree (3 years min) in the engineering fields covered by the Master's program (Electrical engineering / computer sciences / communication engineering...).
- > B2 level in English

LANGUAGE REQUIREMENTS

English (at least one of the following)

- > Mother tongue;
- > English Language Qualification
 - TOEFL 564 (PBT), 213 (CBT), 80 (IBT)
 - IELTS: 5.5
 - TOEIC: 750
 - Cambridge CAE

TYPICAL JOBS

The Master in Data Science and Engineering opens to a wide array of industries and business domains (client relation management, logistics, production, finance, marketing...).

The need for trained specialists in Big Data is constantly growing as shown by recent studies and results in very good employment prospects for future graduates.

Some of the targeted fields:

- > Retail
- > Finances and banking
- > Manufacturers (car, aviation)
- > Services providers (Telecommunication, energy...)
- > Science and research

PROFESSIONS

- > Data analytics engineer
- > Big Data architect
- > Research and development engineer
- > Consultant
- > Product Manager for Big Data solutions
- > Business Intelligence Analyst
- > Business Analytics solutions provider

APPLYING

All applications should be made on line

<https://www.eurecom.fr/en/postulant/new>

The web site provides full information on admission procedures.

<http://www.eurecom.fr/en/teaching/master-science>

COST

Tuition fees for the full program (2 years):

€11,000

€5,000 (European Union and Erasmus zone) Possible partial fee waivers and scholarships.

DURATION

2 years (starting in september):

3 semesters of courses followed by a 6- month paid internship in a lab or company.

LODGING

Accommodation is organized with the administration staff or EURECOM in public and private student halls of residence, rooms or shared flats.

SCHOOL CONTACTS

EURECOM

Campus SophiaTech,
450 Route des Chappes, CS 50193
06904 Biot Sophia Antipolis cedex
FRANCE

www.eurecom.fr

Admissions

admission@eurecom.fr

Tel: +33 (0)4 93 00 81 00

Skype: admission.eurecom



Institut Mines-Télécom

IMT
International Relations
37-39 rue Dareau
75014 Paris - France
international@imt.fr
www.imt.fr

DIGITAL SECURITY

MASTER OF SCIENCE

ACCREDITATION

National Accreditation by the French Ministry of Education, Higher Education and Research.

The degree can lead to enrollment in a Phd program.

KEY WORDS

Security, Network Security, Software Security, Malware Analysis, Intrusion Detection, Cryptography, Watermarking, Biometrics, Digital Forensics...

STRONG POINTS OF THE PROGRAM

- > The teaching program benefits from a unique location and from the expertise of renowned industrial partners.
- > EURECOM is located in Sophia Antipolis, Europe's largest technology park, a hotbed of internships and jobs opportunities for students.
- > EURECOM is a consortium of leading international universities and top ICT companies and has established a synergy with the local industrial environment on advanced research topics.
- > During their Master, students will have access to cutting-edge technological platforms within EURECOM's Wireless Communications Laboratory.
- > Students are supervised by internationally renowned researchers.
- > A 6-month paid internship which provides a cutting-edge experience. EURECOM has its own database of internship offers in several countries.
- > A fully dedicated team providing administrative support to international students
- > A strong international exposure providing essential intercultural tools (only school in France with 2/3 of international students and professors)

SCHOOL OFFERING THE MASTER

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The degree is co accredited by IMT (Institut Mines-Télécom).

INDUSTRIAL PARTNERS

BMW Group, IABG, Orange, Monaco Telecom, SAP, ST-Microelectronics, Symantec.

LANGUAGE OF TEACHING

100% teaching in English. French is taught as a foreign language throughout the program. A 3-week program of intensive French courses is organised in September.

ENVIRONMENT

Ranging from simple spoofing or tampering of personal data to distributed denial of service attacks jeopardizing global network operation, security problems are viewed as the major impediment to further development in the computer and communications field.

As the main countermeasure to these problems, security of communications and computer systems became an important requirement both for users of on-line services and for technical specialists involved in the design of networks and applications. Security mechanisms therefore are embedded as an essential building block of all computer and communications systems at early stages of the design. Recently designed systems like wireless and mobile standards, peer- to-peer applications all include sophisticated security mechanisms as opposed to their earlier counterparts like the original Internet protocols that were severely lacking security functions.

COURSE AIMS

The master in Digital Security aims at providing a solid background in the design and management of security in major areas of communications and computer science. The professional training in security will be offered as a complement to an advanced program in computer networking, mobile services and imaging. Graduates will thus be able to tackle security problems encountered in networking, distributed software applications and image processing.

Various technical areas ranging from secure software to cryptographic mechanisms and practical countermeasures against network attacks through watermarking of images and biometric identification techniques will be addressed in several courses and laboratories.

PROGRAM

The Master's program is made of 4 full-time semesters: 3 semesters of courses followed by a 6-month Msc thesis in industry or in a research lab.

Scientific and Technical courses

- > System and Network Security
- > Security Applications in networking and distributed systems
- > Cyber-crime and computer forensics
- > Secure Communications
- > Security of Security hardware
- > Imaging for Security, safety and forensics
- > Introduction to computer networking and internet
- > Internet Applications
- > Distributed algorithms
- > Image and Video Compression and Processing
- > Software Development methodologies
- > Human Computer interaction for the Web : interaction design and user evaluation
- > Internetworking architectures and protocols
- > Distributed system and cloud computing
- > Mobile Networking
- > Wireless Access technologies
- > Applied algorithm design
- > An introduction to Semantic web technologies

Soft skills / Management modules

- > Introduction to Management
- > Personal development and Team
- > Leadership
- > Entrepreneurship and Capital Venture
- > Innovation and new product development
- > Business Simulation
- > Sociological approaches of telecom technologies (course given in French)
- > Project Management
- > Sustainable ICT's (Green IT)
- > Intellectual Property Law
- > General Introduction to Law

Also part of the program:

- > Company visits and seminars
- > Scientific and Technical Projects
- > French language
- > Professional coaching (workshops on CV/professional interviews)
- > 6-month thesis in Industry or Research lab

DIGITAL SECURITY

MASTER OF SCIENCE

ADMISSION REQUIREMENTS

Entry requirements include a Bachelor's degree in the engineering fields covered by the Master program (Electrical engineering / computer sciences / communication engineering...).

LANGUAGE REQUIREMENTS

- > English (at least one of the following)
- > Mother tongue;
- > English Language Qualification
 - TOEFL 564 (PBT), 213 (CBT), 80 (IBT)
 - TOEIC: 750
 - Cambridge CAE

APPLYING

All applications should be made online:

<https://www.eurecom.fr/en/postulant/new>

The website provides full information on application procedures:

<http://www.eurecom.fr/en/teaching/master-science>

COMPETENCES ACQUIRED

- > Solid background in design & management of security in computer and communication systems
- > Design of secure communications systems
- > Protection of existing systems
- > Expertise in theoretical foundations of security
- > Hands-on experience with software and networked systems
- > Knowledge of security applications in communications and information systems
- > Security skills as a complement to networking (mobile & fixed), image processing and software engineering

TYPICAL JOBS

- > Security architect
- > Security officer
- > Network manager
- > Security consultant
- > Software Engineer with strong security expertise
- > System Engineer with strong security expertise
- > Telecommunications Engineer with strong security expertise

PROFESSIONS

By providing security skills as well as a solid competence in widely demanded fields like mobile networking, web engineering and image processing this Master broadens the employment sector from security specialists to a range of companies in the IT field that need and highly value additional security expertise. Potential employers thus include companies specialized in security fields such as

- > Network and Software Security Manufacturers (Firewall, IDS, Antivirus...)
 - > Network and Software Security Service Providers (Security consulting, ethical hacking services)
- but also companies in the broader field of ICT as follows
- > Hardware and software manufacturers
 - > Professional Services (consulting, project management) Communication equipment manufacturers
 - > Network operators
 - > Application providers

COST

Tuition fees for the full program (2 years):

€11,000

€5,000 (European Union and Erasmus zone) Possible partial fee waivers and scholarships.

DURATION

2 years (starting in september):

3 semesters of courses followed by a 6- month paid internship in a lab or company.

LODGING

Accommodation is organised with the Administration Staff of EURECOM in student halls of residence, rooms or shared flats.

SCHOOL CONTACTS

EURECOM
Campus SophiaTech
450 Routes des Chappes
CS 50193
06410 Sophia Antipolis
FRANCE

www.eurecom.fr

Tel: +33 (0)4 93 00 81 00

Fax: +33 (0)4 93 00 82 00

Admissions:

admission@eurecom.fr



Institut Mines-Télécom

IMT
International Relations
37-39 rue Dareau
75014 Paris - France
international@imt.fr
www.imt.fr

INTERNET OF THINGS

MASTER OF SCIENCE

ACCREDITATION

National Accreditation by the French Ministry of Education, Higher Education and Research. It can give access to Phd Studies.

KEY WORDS

Sensors, Actuators, Low-energy communication, Big Data, Data Semantic, Machine Learning, Security, Business Intelligence

SCHOOL OFFERING THE MASTER

EURECOM, a «Grande Ecole» with a 100% curriculum in English. It is located on the French Riviera, between Nice and Cannes.

The degree is co accredited by IMT (Institut Mines-Télécom).

INDUSTRIAL PARTNERS

ORANGE, SYMANTEC, SAP, ST, Monaco Telecom, BMW Group Research & Technology, IABG.

LANGUAGE OF TEACHING

100% English.

French is taught as a foreign language throughout the program. A 3-week program of intensive French courses is organised in September.

ENVIRONMENT

The Internet of Things (IoT) represents a new stage in the digital revolution, fully contributing to the construction of a digital society. Several sectors of the digital society use or will use the internet of objects to improve deployment, exploitation and industrialization procedures. These include intelligent transport, smart grids, smart city, industry 4.0, and so on. The issues concerning the mastery of the technologies and processes around the internet of objects are enormous and require a very high level of expertise with cutting-edge skills in multi disciplinary areas.

COURSE AIMS

The Master of Science in Internet of Thing offers the necessary technical knowledge and advanced skills to create IoT innovations at the cutting edge of Big Data /sensor/cloud technologies.

PROGRAM

The Master's program is a full-time program made of 3 semesters of courses followed by a 6-month Msc thesis in industry or in a research lab.

Scientific and technical modules

- > Operating systems
- > System and Network Security
- > Advanced Data Science Topics
- > Machine Learning and Intelligent System
- > Mobile application and services
- > Network Modeling
- > Fundamentals of Optimisation
- > Software development methodologies
- > IoT Application Protocols
- > IoT Communication Protocols
- > An Introduction to Semantic Web technologies
- > Algorithmic Machine Learning
- > Deep Learning
- > Mobile Networking
- > Network Softwerization
- > Security applications in networking and distributed systems

Management modules

- > Entrepreneurship and Capital-Venture
- > Innovation & new product development
- > Introduction to management
- > Intellectual property law
- > Personal Development and Team Leadership
- > Business Simulation
- > General introduction to law
- > Project management

Also part of the program

- > Career Preparation workshops (CV, interviews,)
- > Company visits
- > 6-month Paid Internship in Industry in France or Abroad (EURECOM provides students with a database of Internship opportunities)

LOCATION

EURECOM is located on the French Riviera (between Nice and Cannes), at the Heart of Sophia Antipolis (largest Techno Park in EUROPE, a major employment hub in France).

The campus provides the following facilities: sports facilities, wireless network, library, associations, etc.

ADMISSION REQUIREMENTS

The Master of Science is open to applicants with at least a scientific Bachelor's degree in a relevant discipline (Computer Science, Electrical Engineering, Applied Mathematics...)

LANGUAGE REQUIREMENTS

English

- > Mother tongue or English proficiency test such as:
 - TOEFL: 564 (PBT), 213 (CBT), 80 (IBT)
 - IELTS : 5.5
 - TOEIC : 750
 - Cambridge : CAE

No prerequisite in French

STRONG POINTS OF THE SCHOOL

- > Internationally renowned Faculty with a high publishing rate in top conferences
- > Access to Cutting-edge technological tools and platforms
- > Hands-on approach to learning and tight links with the Industry
- > A Human-sized school offering a favorable Student / Professor ratio
- > A Paid 6-month Master's thesis in industry
- > Access to a regularly updated and large database of Master's thesis opportunities in companies or labs.
- > Career Preparation Program (CV and Interview workshops, Recruitment Fairs, Company Visits...)
- > Free Program of French language and Cultural visits before the start of the program (3 weeks)
- > Individual assistance and help with all administrative issues in France
- > A pick up at the airport and train station
- > Partial Tuition fee waivers based on academic excellence
- > Numerous Students activities (trips abroad, International Meal, fresher's weekend, sport and cultural clubs...)
- > An unparalleled natural environment on the worldwide famous French Riviera (300 days of sun per year)

INTERNET OF THINGS

MASTER OF SCIENCE

COMPETENCES ACQUIRED

The curriculum offers a cohesive blend of mandatory technical courses coupled with courses in Management / Entrepreneurship to foster a spirit of business initiative among students. It relies on very hands-on approach with many laboratory works, supervised semester-long projects on a topic of industrial relevance and a paid 6-month internship in a company.

- > Design tools for processing and analyzing large amounts of data from sensors;
- > Design and develop IoT applications and services adapted to industrial needs
- > Understand and design communication mechanisms adapted to the constraints of the sensors (energy consumption, lack of computing capacities)
- > Acquire dual competences technical courses in advanced fields (data exploitation, software development, communication networks in constrained environments, Machine Learning, sensor security) associated with courses in Innovation, Project Management, Entrepreneurship ...
- > Acquisition of written and oral communication skills to make a compelling technical presentation
- > Project planning skills : Organizational and Team Leadership competences

TYPICAL JOBS

- > IoT Consultant
- > IoT Developer
- > IoT Innovation Manager
- > IoT Solutions Architect
- > IoT Project Manager
- > Data Scientist

SCHOLARSHIPS

Partial Tuition Fee Waiver for students from University partners and highly ranked students.
Scholarships from French Embassies...

CALENDAR

One intake per year in September.
3 academic semester at EURECOM followed by a 6-month paid internship in a company.

LODGING

EURECOM has an online platform of accommodation offers, from public student residents to flat-sharing in villas and individual studio options. EURECOM students live in several cities nearby: Antibes (a charming city by the seashore), Nice (5th biggest French city); Valbonne or Biot.

<https://housing.eurecom.fr/en/>

COST

Tuition fees for the full program (2 years):

€11,000

€5,000 (European Union and Erasmus zone) Possible partial fee waivers and scholarships.

APPLYING

All applications should be made online:

<https://www.eurecom.fr/en/postulant/new>

The website provides full information on application procedures:
<http://www.eurecom.fr/en/teaching/master-science>

SCHOOL CONTACTS

E-mail:

admission@eurecom.fr

Tel: +33 (0)4 93 00 81 33

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Campus SophiaTech

450 Route des Chappes

06410 Biot

Sophia Antipolis

FRANCE



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www.imt.fr

MOBILE COMPUTING SYSTEMS

MASTER OF SCIENCE

ACCREDITATION

National Accreditation by the French Ministry of Education, Higher Education and Research.

The degree can lead to enrollment in a Phd program.

KEY WORDS

Mobile Communications Systems, Wireless Communications, Mobile Networking, Mobile Applications and Services, Intellectual Property law, Signal Processing Technology.

STRONG POINTS OF THE PROGRAM

- > The teaching program benefits from a unique location and from the expertise of renowned industrial partners.
- > EURECOM is located in Sophia Antipolis, Europe's largest technology park, a hotbed of internships and jobs opportunities for students.
- > EURECOM is a consortium of leading international universities and top ICT companies and has established a synergy with the local industrial environment on advanced research topics.
- > During their Master, students will have access to cutting-edge technological platforms within EURECOM's Wireless Communications Laboratory.
- > Students are supervised by internationally renowned researchers.
- > A 6-month paid internship which provides a cutting-edge experience. EURECOM has its own database of internship offers in several countries.
- > A fully dedicated team providing administrative support to international students
- > A strong international exposure providing essential intercultural tools (only school in France with 2/3 of international students and professors)

SCHOOL OFFERING THE MASTER

EURECOM, a «Grande Ecole» with a 100% curriculum in English. It is located on the French Riviera, between Nice and Cannes. The degree is co accredited by IMT (Institut Mines-Télécom).

INDUSTRIAL PARTNERS

BMW Group, IABG, Orange, Monaco Telecom, SAP, ST-Microelectronics, Symantec.

LANGUAGE OF TEACHING

100% teaching in English. French is taught as a foreign language throughout the program. A 3-week program of intensive French courses is organised in September.

ENVIRONMENT

The rapid development of mobile systems (LTE, WIFI...) is providing advanced transmission technologies to support new applications and services (video streaming, web access, social networks...). The background of Engineers working in mobile communications ranges from physical layer (wireless communications theory and implementation aspects), mobile networking (based on IPV6), to applications (for smartphone, tablets...) The Master in Mobile Computing Systems addresses jointly all the techniques that were traditionally treated in a separate fashion in wired networks.

COURSE AIMS

- > Provide the theoretical background and the applied know-how for engineers in Mobile Communications Systems.
- > Learn to tackle problems from a system viewpoint, taking vertical cut and following a cross-layer approach.
- > Acquire and master tools and methods to follow the rapid evolution of technology and provide solutions leading to future generations of systems.
- > Acquire managerial knowledge to provide innovation in Mobile Communications Systems (Project Management, Organization, innovation management...).

PROGRAM

The Master's program is made of 4 full-time semesters: 3 semesters of courses followed by a 6-month Msc thesis in industry or in a research lab.

Scientific and Technical courses

- > Mobile Communication Systems
- > Mobile Communication Techniques
- > Advanced topics in Wireless communication
- > Digital Communication
- > Statistical Signal Processing
- > Mobile application and services
- > Network modeling
- > Radio Engineering
- > Wireless Access technologies
- > Mobile Networking
- > Mobile Advanced Networks
- > Signal Processing Technologies
- > Channel Coding theory
- > Signal Processing for Communications

Soft skills / Management modules

- > Introduction to Management
- > Personal development and Team
- > Leadership
- > Entrepreneurship and Capital Venture
- > Innovation and new product development
- > Business Simulation
- > Sociological approaches of telecom technologies (course given in French)
- > Project Management
- > Sustainable ICT's (Green IT)
- > Intellectual Property Law
- > General Introduction to Law

Also part of the program:

- > Company visits and seminars
- > Scientific and Technical Projects
- > French language
- > Professional coaching (workshops on CV/professional interviews)
- > 6-month thesis in Industry or Research lab

ADMISSION REQUIREMENTS

- > a Bachelor's degree (3years min) in the engineering fields covered by the Master's program (Electrical engineering / computer sciences / communication engineering...).
- > B2 level in English

MOBILE COMPUTING SYSTEMS

MASTER OF SCIENCE

LANGUAGE REQUIREMENTS

English (at least one of the following)

- > Mother tongue;
- > English Language Qualification
 - TOEFL 564 (PBT), 213 (CBT), 80 (IBT)
 - IELTS: 5.5
 - TOEIC: 750
 - Cambridge CAE

APPLYING

All applications should be made online:

<https://www.eurecom.fr/en/postulant/new>

The website provides full information on application procedures:

<https://www.eurecom.fr/en/teaching/master-science/master-degree-mobile-computing>

COMPETENCES ACQUIRED

- > A global view of the major challenges of future Mobile Communications Systems
- > A strong theoretical background in communications and networking to address the fixed /wireless convergence
- > Knowledge of the most recent industrial developments and standards
- > Introduction to advanced research topics

TYPICAL JOBS

The Master in Mobile Computing Systems gives access to the Telecom Equipment industry, to the Telecom Operators industry and to the academic/theoretical research world.

All national and international institutions in the field of communications systems provide career opportunities to graduated students:

- > Operators
- > Telecommunications industry
- > Consulting companies in Information Technologies
- > Regulators
- > Software editors
- > Semi conductor industry
- > Other industries (car manufacturers...)

PROFESSIONS

- > Research and development in Communication Systems
- > Network Consulting
- > Network Architect
- > Communications Software Development
- > Communications Hardware Development
- > Project Management
- > Telecom Policy Making

COST

Tuition fees for the full program (2 years):

€11,000

€5,000 (European Union and Erasmus zone) Possible partial fee waivers and scholarships.

DURATION

2 years (starting in september):

3 semesters of courses followed by a 6- month paid internship in a lab or company.

LODGING

Accommodation is organised with the Administration Staff of EURECOM in student halls of residence, rooms or shared flats.

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IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

ARCHITECTURE AND ENGINEERING FOR THE INTERNET OF THINGS

MASTER OF SCIENCE

ACCREDITATION

Internationally recognized Master's Degree in Information technologies (IT) accredited by the French Ministry of Higher Education and Research.

National Accreditation Reference: 1702068Z

Co-accredited with the University of Southern Brittany (Université de Bretagne Sud, UBS).

KEY WORDS

Information Technologies / Internet of Things / Data Science / Computer Networking / Convergent Networks / Wireless Networks / Mobile Networks / Internet / Network Services / Network Solution Design / Network Planning and Design

SCHOOL PROPOSING THE MASTER

IMT Atlantique, a «grande école» which is part of the IMT (Institut Mines-Télécom), a leading French higher education and research institution in engineering, with 12,500 students.

LOCATION

Classes are given in Brest (1st year) and in Rennes (2nd year) which are located in Brittany, one of the most visited areas in France due to its breathtaking landscapes and seascapes as well as its numerous historical treasures. Both campuses are well located and include halls of residence: in Brest, in the centre of the Science Park overlooking the entrance to the Bay and in Rennes, in the centre of the Research Park.

STRONG POINTS OF THE PROGRAM

Besides being a flagship of European institutes of higher education, IMT Atlantique is affiliated with many networks of alliances in France and abroad, as well as a pole for high-level research activities. Strong links with industry have made it possible to reach excellence in pedagogical methods, project-based teaching and corporate research.

Almost half of the students come from outside France, with more than 50 nationalities on our campuses. This fact reflects a very high intercultural dimension and results in an interesting, enjoyable, multicultural everyday life experience.

Furthermore, the teaching staff consists of internationally renowned specialists in IoT, IP network technologies, mobile networks and services and network security.

INDUSTRIAL PARTNERS (COURSES AND INTERNSHIPS)

Aéroport de Paris, Air France, Alcatel-Lucent, Astellia, BNP Paribas, Bouygues Télécom, Free Mobile, Mitsubishi Electric ITCE, Niji, Orange Labs / France Telecom R&D, Qualcomm, Société Générale, SFR, Technicolor, Thalès...

LANGUAGE OF TEACHING

The first semester classes are taught in English. Over this period, students acquire sufficient skills in the French language to be able to follow the second semester lectures together with native speakers. Progressive immersion in the French language and culture, an educational challenge, is one of the special features of the curriculum.

3rd semester lectures can be taught in English on demand.

ENVIRONMENT

Internet of Things (IoT) is the next revolution for the Internet. After the convergence with telephony, media distribution, the goal with IoT is to connect autonomous vehicle, manage process in industry 4.0, pilot a city to reduce pollution or monitor elderly people. There is a vast area of applications.

Nevertheless, IoT is a big technical and business challenge, which implies an entire network protocol redesign to integrate constrained objects and limited radio connectivity. Security must be revisited to protect vital processes managed by IoT. Energy consumption must be taken into account to guaranty several years autonomy on batteries. Protocols must be also reshaped to reduce their footprint and therefore equipment cost. Last but not least, IoT must find its place in the value chain and the integration with current processes must be carefully defined.

All these challenges are currently discussed by the industry. As a major actor in standardization, in security with the cyber security chair and a pioneer in Fab Labs, IMT Atlantique covers all the main skills to enlighten the IoT revolution.

COURSE AIMS

This MSc program is aimed at future experts for the design and engineering of networks with a wide field of applications and a focus on IoT.

The class requires a good level in programming in different languages (C++, python, javascript) to design IoT devices and connect them to specifically designed networks (Sigfox, LoRAWAN, 5G,...). This helps to understand the constrained nature of IoT devices. This course allows also to understand how measurements can be transformed into valuable information than can be exploited by applications or cloud computing.

This Masters program also offers a gateway to PhD studies.

PROGRAM

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

First semester (in Brest)

- > Networking fundamentals
- > Introduction to data science
- > Basics of computer science
- > Mathematics & signal processing
- > Bibliographical study
- > Intercultural workshops
- > Intensive French language courses (6 hours per week)

Second semester (in Brest)

- > Networks: Architectures, protocols, IP networks, mobile networks, IoT
- > Computer science: software engineering and object-oriented programming, databases and information systems
- > An engineering project in working groups of 5 or 6, focused on acquiring project management experience and applying knowledge acquired in coursework
- > French language (3 hours per week)

Third semester (in Rennes)

- > Cloud computing and big data
- > Software-defined networks
- > IPv6 for IoT
- > Intelligent network and services
- > IoT security
- > Services for communication networks
- > New network architectures
- > Networking research seminar
- > Architecture, access and interfaces for cellular networks
- > Project: During this semester, students also work on a short project. This project, which can be either done individually or in pairs, may take different forms: software development; a bibliographical study of a research subject; participation in

ARCHITECTURE AND ENGINEERING FOR THE INTERNET OF THINGS

MASTER OF SCIENCE

the design, setup or assessment of research testbeds, etc....
For this project, students will work either with an industrial partner or with a research team from the Networks, Security & Multimedia department at IMT Atlantique

> French language courses (3 hours per week)

Fourth semester

This semester is spent carrying out a development or research project in an industrial or academic laboratory in France or abroad.

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

ADMISSION REQUIREMENTS

The entry requirements include a first-class Bachelor's degree or a four-year degree in one of the academic topics offered by the Master's course. Candidates have to show an outstanding academic record for their application to be considered.

A solid background in mathematics is a necessary prerequisite, as well as sound knowledge of computer science. Prior experience with the basics of computer networking and/or telecommunications, though recommended, is not mandatory.

LANGUAGE REQUIREMENTS

English

When applying, students must provide proof of proficiency in the English language. This could include:

- > having English as mother tongue
- > work/studies in an English-speaking country
- > acquisition of an official English language qualification such as:
 - TOEFL: 550/677 (Paper-based) or 79/120 (Internet-based)
 - IELTS: 6/9
 - TOEIC: 750/990
 - Cambridge: CAE (Certificate of Advanced English)

French

Knowledge of French is not mandatory before arrival in France. In addition to French language courses during the academic year, a 3-week intensive French language course is organized by IMT Atlantique in August. This course is provided for all MSc students at no extra cost (except living expenses, insurance and social activities).

Groups range from beginner to intermediate level.

APPLYING

Apply at

<http://www.imt-atlantique.fr/fr/formation/masters/masters-science>

COMPETENCES ACQUIRED

Thanks to IMT Atlantique's expertise in postgraduate education and research, high-level competencies are acquired not only in technical/scientific fields but also in team working, written and oral communication, innovation and project management. Last but not least, French language skills are also one of the new competencies beneficial for working in France and other French-speaking countries, or for French companies abroad.

TYPICAL JOBS

- > Network solution designer
- > Network planner and designer
- > Network architect
- > Network project leader
- > Network integration leader
- > R&D engineer
- > Consulting expert
- > Researcher and Academic

COST

Tuition fees for the full 2-year program:

€10,200

€5,200 (Europe and Erasmus zone)

Possible partial fee waivers

SCHOLARSHIPS

Scholarships are available depending on academic record and country of origin (companies, governments, embassies, etc.). It should be mentioned that internships are paid and cover living expenses during the last semester.

DURATION

2 years (starting in mid-August)

LODGING

Living expenses are quite low in Brittany compared to other locations in France, Europe or United States. The total amount does not exceed €6,000 per year (on-campus food and accommodation).

FOLLOW IMT ATLANTIQUE ON SOCIAL NETWORKS

Facebook IMTAtlantique

Twitter @IMTAtlantique

Instagram @imt_atlantique

CONTACT

IMT Atlantique
Brest Campus
Graduate Office / MSc
CS 83818
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<http://www.imt-atlantique.fr/fr/formation/masters/masters-science>

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www.imt.fr

COMMUNICATION SYSTEM AND NETWORK ENGINEERING

MASTER OF SCIENCE

ACCREDITATION

Internationally recognized Master's Degree in Information technologies (IT) accredited by the French Ministry of Higher Education and Research.

National Accreditation Reference: 1702068Z

Co-accredited with the University of Southern Brittany (Université de Bretagne Sud, UBS).

KEY WORDS

Information Technologies / Networking / Wireless Systems / Mobile Systems / Optical Communications / Digital Communications / Computer Science / Data Science / Internet

SCHOOL PROPOSING THE MASTER

IMT Atlantique, a «grande école» which is part of the IMT (Institut Mines-Télécom), a leading French higher education and research institution in engineering, with 12,500 students.

LOCATION

Classes are given in Brest which is located in Brittany, one of the most visited areas in France due to its breathtaking landscapes and seascapes as well as its numerous historical treasures. The campus is well located in the centre of the Science Park overlooking the Bay; it includes halls of residence and cafeteria.

STRONG POINTS OF THE PROGRAM

Besides being a flagship of European institutes of higher education, IMT Atlantique is affiliated with many networks of alliances in France and abroad, as well as a pole for high-level research activities. Strong links with industry have made it possible to reach excellence in pedagogical methods, project-based teaching and corporate research.

Almost half of the students come from outside France, with more than 50 nationalities on our campuses. This fact reflects a very high intercultural dimension and results in an interesting, enjoyable, multicultural everyday life experience.

Furthermore, the teaching staff consists of internationally renowned specialists in Information Technologies and Engineering.

INDUSTRIAL PARTNERS (COURSES AND INTERNSHIPS)

Alcatel-Lucent, Amazon, Bouygues Telecom, Completel, Mitsubishi, Orange Labs, SFR, Thales Communications...

LANGUAGE OF TEACHING

The first semester classes are taught in English. Over this period, students acquire sufficient skills in the French language to be able to follow second and subsequent semester lectures together with native speakers. Progressive immersion in the French language and culture, an educational challenge, is one of the special features of the curriculum.

ENVIRONMENT

Information technologies have led to the new era of communication, which in turn has rapidly changed many aspects of society, from individual behaviours to the global economy. Numerous services have become very common, such as calling and sending emails from almost everywhere, purchasing online, watching digital TV through ADSL connections or via satellite digital broadcast, travelling using GPS, etc. All of these applications necessarily rely on fixed and mobile networks that are based on sophisticated communication systems and complex network infrastructures.

COURSE AIMS

This MSc program is aimed at future experts for the design and/or administration of high-performance telecommunication networks. This requires a wide range of knowledge, including wireless, wired and optical communication systems, digital communications, network architectures, and project management of complex systems. Certain aspects of computer science and data science are involved as well. Professionals are therefore multi-field engineers rather than narrowly focused specialists.

This Masters program also offers a gateway to PhD studies.

PROGRAM

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

First semester

- > Communications systems: high-speed optical and radio links design
- > Networking fundamentals
- > Introduction to data science
- > Basics of computer science
- > Mathematics & signal processing
- > Bibliographical study
- > Intercultural workshops
- > Intensive French language courses (6 hours per week)

Second semester

- > Networks: architectures, protocols, IP networks, mobile networks
- > Computer science: software engineering and object-oriented programming, databases and information systems
- > An engineering project in working groups of 5 or 6, focused on acquiring project management experience and applying knowledge acquired in coursework
- > French language (3 hours per week)

Third semester

- > Architecture and traffic engineering principles for telecom operators' networks
- > Wireless transmission systems
- > Architectures and services for fixed and mobile networks
- > Network planning, dimensioning and deployment strategies
- > Architectures and multimedia services
- > Complex project management
- > Project in communication system engineering
- > French language (3 hours per week)

Fourth semester

This semester is spent carrying out a development or research project in an industrial or academic laboratory in France or abroad.

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

ADMISSION REQUIREMENTS

The entry requirements include a first-class Bachelor's degree or a four-year degree in one of the academic topics offered by the Master's course. Candidates have to show an outstanding academic record for their application to be considered.

COMMUNICATION SYSTEM AND NETWORK ENGINEERING

MASTER OF SCIENCE

LANGUAGE REQUIREMENTS

English

When applying, students must provide proof of proficiency in the English language. This could include:

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French

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Groups range from beginner to intermediate level.

APPLYING

Apply at

<http://www.imt-atlantique.fr/fr/formation/masters/masters-science>

COMPETENCES ACQUIRED

Thanks to IMT Atlantique expertise in postgraduate education and research, high-level competencies are acquired not only in technical/scientific fields but also in team working, written and oral communication, innovation and project management. Last but not least, French language skills are also one of the new competencies beneficial for working in France and other French-speaking countries, or for French companies abroad.

TYPICAL JOBS

- > Telecommunications project leader
- > Communication system designer
- > Network architect
- > R&D engineer
- > Sales engineer
- > Consulting expert
- > Researcher and Academic

COST

Tuition fees for the full 2-year program:

€10,200

€5,200 (Europe and Erasmus zone)

Possible partial fee waivers

SCHOLARSHIPS

Scholarships are available depending on academic record and country of origin (companies, governments, embassies, etc.). It should be mentioned that internships are paid and cover living expenses during the last semester.

DURATION

2 years (starting in mid-August)

LODGING

Living expenses are quite low in Brittany compared to other locations in France, Europe or United States. The total amount does not exceed €6,000 per year (on-campus food and accommodation).

FOLLOW IMT ATLANTIQUE ON SOCIAL NETWORKS

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Instagram @imt_atlantique

CONTACT

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www.imt.fr

DATA SCIENCE

MASTER OF SCIENCE

ACCREDITATION

Internationally recognized Master's Degree in Information Technologies (IT) accredited by the French Ministry of Higher Education and Research.

National Accreditation Reference: 1702068Z

Co-accredited with the University of Southern Brittany (Université de Bretagne Sud, UBS).

KEY WORDS

Data Science / Computer Science Artificial Intelligence / Business Intelligence/ Data Warehouse / Knowledge Discovery / Data, Text, Web and Social Network Mining / Statistical Inference Knowledge Management / Knowledge- Based Systems / Information Systems Decision Support Systems / Decision Aiding

SCHOOL PROPOSING THE MASTER

IMT Atlantique, a «grande école» which is part of Institut Mines-Télécom, a leading French higher education and research force in engineering, with 12,500 students.

The University of South Brittany is a multidisciplinary institution with academic programmes from bachelor's level to the doctorate in different areas : arts, social sciences, engineering, computer science, biochemistry, mathematics, law, economics and business.

LOCATION

Classes are given in Brest and Vannes which are both located in Brittany, one of the most visited areas in France due to its breathtaking landscapes and seascapes as well as its numerous historical treasures. Brest campus (IMT Atlantique) is located in the centre of the Science Park overlooking the entrance to the Bay. It includes halls of residence and cafeteria. Vannes campus (UBS) is close to the Gulf of Morbihan and offers facilities nearby.

STRONG POINTS OF THE PROGRAM

Besides being flagships of European institutes of higher education, IMT Atlantique and UBS are affiliated with many networks of alliances in France and abroad, as well as a pole for high- level research activities. Strong links with industry have made it possible to reach excellence in pedagogical methods, project-based teaching and corporate research.

Almost half of the students come from outside France, with more than 50 nationalities on our campuses. This fact reflects a very high intercultural dimension and results in an interesting, enjoyable, multicultural everyday life experience.

iSchools

Furthermore, the teaching staff consists of internationally renowned specialists Information technologies and Engineering. These competencies have made IMT Atlantique the only French institution accredited as a school of information studies (www.ischool.org).

INDUSTRIAL PARTNERS

(COURSES AND INTERNSHIPS)

Arkéa Crédit Mutuel de Bretagne, BNP Paribas Assurances, Dassault Aviation, Ifremer (French Research Institute for Exploration of the Sea), INSERM (National Health and Medical Research Institute) & Stat Life, Orange Labs / France Telecom R&D, SAS, SHOM (French Hydrographic and Oceanographic Institute), Thales Aerospace and Research & Technology...

LANGUAGE OF TEACHING

The first semester classes are taught in English. Over this period, students acquire sufficient skills in the French language to be able to follow second and subsequent semester lectures together with native speakers. Progressive immersion in the French language and culture, an educational challenge, is one of the special features of the curriculum.

ENVIRONMENT

In the last few decades, companies have accumulated overwhelming amounts of data, be it textual (reports, emails, phone call transcripts, etc.), numeric (sales figures, meteorological data, etc.) or binary (images, audio, sensor data, etc.). Using statistical "data mining" methods, one can detect tendencies, hidden patterns and knowledge nuggets, and use them to make strategic decisions. This process is of crucial importance in all sectors of activity, and in particular for business, science, politics, security, healthcare, etc.

COURSE AIMS

This MSc program is aimed at future experts in the design of high-performance support systems for data mining, knowledge extraction and decision aiding. This Masters program also offers a gateway to PhD studies.

PROGRAM

This is a full-time, two-year course divided into four semesters. The 1st semester is a common core given in English in Brest. From the 2nd semester students can focus on Intelligent Decision Systems (IDS) in Brest or in Statistical Decision Engineering (SDE) in Vannes.

First semester (in Brest)

- > Basics of computer science
- > Mathematics & signal processing
- > Introduction to data science
- > Networking fundamentals
- > Bibliographical study
- > Intercultural workshops
- > French language (6 hours per week)

Second semester (IDS)

- > Software & data engineering
- > Computer science fundamentals
- > Mathematics and Information theory
- > An engineering project in working groups of 5 or 6, focused on acquiring project management experience and applying knowledge acquired in coursework
- > French language (3 hours per week)

Second semester (SDE)

- > Data mining and machine learning
- > Duration modelling and survival analysis
- > Decision support systems and data warehouse
- > Projects and consulting
- > French language

Third semester (IDS)

- > Frequentist Statistics and Probabilistic
- > Graphical Networks
- > Information systems applied to decision support
- > Knowledge engineering
- > Data, text and Web mining
- > Decision aiding
- > Project in decision support systems

DATA SCIENCE

MASTER OF SCIENCE

- > French language (3 hours per week)
- > During the third semester the following state-of-the-art software tools are used: SAS, RapidMiner, R, Weka, Diviz, GATE, Python NLTK, and others.

Third semester (SDE)

- > Complex data modelling
- > Support vector machine (SVM)
- > Insurance statistics and analytical marketing
- > Deep learning and artificial intelligence
- > Geographic information systems (GIS)
- > Project in statistical decision engineering

Fourth semester

This semester is spent carrying out a development or research project in an industrial or academic laboratory in France or abroad.

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

ADMISSION REQUIREMENTS

The entry requirements include a first-class Bachelor's degree or a four-year degree in one of the academic topics offered by the Master's course. Candidates have to show an outstanding academic record for their application to be considered.

LANGUAGE REQUIREMENTS

English

When applying, students must provide evidence of proficiency in the English language. This could include:

- > having English as mother tongue
- > work/studies in an English-speaking country
- > acquisition of an official English language qualification such as:
 - TOEFL: 79/120 (iBT) or 550/677 (PBT)
 - IELTS: 6/9
 - TOEIC: 750/990
 - Cambridge: CAE (Certificate of Advanced English)

French

Good knowledge of French is not mandatory before arrival in France, but candidates are encouraged to begin learning French in their home countries, before departure. In addition to French language courses during the academic year, a 3-week intensive French language course is organized by IMT Atlantique in August. This course is provided for all MSc students at no extra cost (except living expenses, insurance and social activities). Groups range from beginner to intermediate level.

APPLYING

Apply at

www.imt-atlantique.fr/fr/formation/masters/masters-science

COMPETENCES ACQUIRED

Thanks to IMT Atlantique and UBS expertise in postgraduate education and research, high-level competencies are acquired not only in technical/scientific fields but also in team working, written and oral communication, innovation and project management.

Last but not least, French language is also one of the competencies acquired, beneficial for working in France and other French-speaking countries or for French companies abroad.

TYPICAL JOBS

- > Data Miner / Analyst
- > Analytics Manager
- > R&D Engineer
- > Consulting Expert
- > Decision Support System Designer • Software developer
- > Business analyst
- > Researcher and Academic.

COST

Tuition fees for the full 2-year program:

€10,200

€5,200 (Europe and Erasmus zone) Possible partial fee waivers

SCHOLARSHIPS

Scholarships are available depending on academic record and country of origin (companies, governments, embassies, etc.). It should be mentioned that internships are paid and cover living expenses during the last semester.

DURATION

2 years (starting in mid-August)

LODGING

Living expenses are quite low in Brittany compared to other locations in France, Europe or United States. The total amount does not exceed €6,000 per year (on-campus food and accommodation).

FOLLOW IMT ATLANTIQUE ON SOCIAL NETWORKS

Facebook IMTAtlantique

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Instagram@imt_atlantique

CONTACT

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www.imt-atlantique.fr/fr/formation/masters/masters-science

Contact Email:

it-admission@imt-atlantique.fr



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INFORMATION SYSTEM GOVERNANCE

MASTER OF SCIENCE

ACCREDITATION

Internationally recognized Master's Degree in Information Technologies (IT) accredited by the French Ministry of Higher Education and Research.

National Accreditation Reference: 1702068Z

Co-accredited with the University of Southern Brittany (Université de Bretagne Sud, UBS).

KEY WORDS

Information Technologies / Management / Conception / Planning and Design / Consulting / Project management / IS Urbanization / TOGAF / Data Science

SCHOOL PROPOSING THE MASTER

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LOCATION

Classes are given in Brest which is located in Brittany, one of the most visited areas in France due to its breathtaking landscapes and seascapes as well as its numerous historical treasures. The campus is located in the centre of the Science Park overlooking the entrance to the Bay. It includes halls of residence and cafeteria.

STRONG POINTS OF THE PROGRAM

In addition to being a flagship of European institutes of higher education, IMT Atlantique is affiliated with many networks in France and abroad, and is a center of high-level research activities. Strong links with industry have made it possible to attain excellence in pedagogical methods, project-based teaching and corporate research.

Almost half of the students come from outside France, with more than 50 nationalities represented on our campuses. This fact gives rise to a significant intercultural dimension and results in an interesting, enjoyable, multicultural everyday life experience.

iSchools

Furthermore, the teaching staff consists of internationally renowned specialists in Information Systems planning and Information Technology management.

These competencies have made IMT Atlantique the only French institution accredited as a school of information studies (www.ischool.org).

INDUSTRIAL PARTNERS (COURSES AND INTERNSHIPS)

Crédit Mutuel Arkéa de Bretagne, BNP Paribas, Bouygues Télécom, Free Mobile, Orange Labs / France Telecom R&D, Qualcomm, Logica-CGI, Accenture, Solucom, Thales Aerospace, Thales Research & Technology...

LANGUAGE OF TEACHING

During the first semester of the program, classes are taught in English. Over this period, students acquire sufficient skills in the French language to attend lectures with native speakers in the following semesters. Progressive immersion in the French language and culture is one of the special features of the curriculum.

ENVIRONMENT

The IT sector and its associated services are one of the engines for growth in a globalized world. The implementation of information systems and business changes the modes of operation within the company, alters the modes of cooperation and negotiation between different actors, affects the strategies of the company with respect to its environment, and raises new legal questions.

COURSE AIMS

This MSc program is aimed at future experts in IT project management and IT & organization consulting, providing them with the necessary skills to analyze the effects of establishing an information system, to participate in the implementation of such a system, and to measure the actual effects of using such systems, especially in an increasingly open environment. Within an information systems management service or as part of a consulting firm supporting a CIO, the expert in IT project management and organization consulting is the link between business needs and technical teams which may be external to the company. As such, s/he has to be able to propose and evaluate technical solutions with respect to a set of specifications.

This program also offers a gateway to PhD studies in IT management.

PROGRAM

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

First semester

- > Networking fundamentals
- > Basics of computer science
- > Mathematics & statistics
- > Introduction to data science
- > Bibliographical study
- > Intercultural workshops
- > Intensive French language courses (6 hours per week)

Second semester

- > Software & data engineering
- > Computer science fundamentals
- > Information policy (economics and social impact of the diffusion of information technology).
- > An engineering project in teams of 5 or 6, focused on acquiring project management experience and applying knowledge acquired in coursework
- > French language (3 hours per week)

Third semester

Choice of one area of specialization: either IS evaluation and consulting or IS project management.

CORE COURSES

1) Basics of Statistics & Network Economics; 2) Management and information systems; 3) Information Systems and Organization Management.

ELECTIVE

Decision Support Information Systems & Information Systems Design and Evolution or Socio-economic Evaluation and Audit of Information Systems & Economics and Legal issues in IT

- > Project in IT system evaluation, consulting or IT project management.
- > French language courses (3 hours per week)

For those planning to apply for a PhD program, specific research courses are possible.

Fourth semester

This semester is spent carrying out a development or research project in an industrial or academic laboratory in France or abroad.

Upon completion of the four semesters, students defend their master's thesis.

INFORMATION SYSTEM GOVERNANCE

MASTER OF SCIENCE

ADMISSION REQUIREMENTS

The entry requirements include a first-class Bachelor's degree or a four-year degree in one of the academic topics offered by the Master's course. Candidates have to show an outstanding academic record for their application to be considered. A background in computer science is a pre-requisite.

LANGUAGE REQUIREMENTS

English

When applying, students must provide evidence of proficiency in the English language. This could include:

- > having English as mother tongue
- > work/studies in an English-speaking country
- > acquisition of an official English language qualification such as:
 - TOEFL: 550/677 (Paper-based) or 79/120 (Internet-based)
 - IELTS: 6/9
 - TOEIC: 750/990
 - Cambridge: CAE (Certificate of Advanced English)

French

Knowledge of French is not mandatory before arrival in France. In addition to French language courses during the academic year, a 3-week intensive French language course is organized by IMT Atlantique in August. This course is provided for all MSc students at no extra cost (except living expenses, insurance and social activities). Groups range from beginner to intermediate level.

APPLYING

Apply at

www.imt-atlantique.fr/fr/formation/masters/masters-science

COMPETENCES ACQUIRED

Thanks to IMT Atlantique expertise in postgraduate education and research, high-level competencies are acquired not only in technical/scientific fields but also in team working, written and oral communication, innovation and project management.

Last but not least, French language skills are also one of the new skills beneficial for working in France and other French-speaking countries or for French companies abroad.

TYPICAL JOBS

- > Project manager in an information system service
- > Consultant in organization & information systems
- > Consultant in information systems marketing
- > Information systems bid engineer
- > Information system manager

COST

Tuition fees for the full 2-year program:

€10,200

€5,200 (Europe and Erasmus zone)

Possible partial fee waivers

SCHOLARSHIPS

Scholarships are available depending on academic record and country of origin (companies, governments, embassies, etc.). It should be mentioned that internships are paid and cover living expenses during the last semester.

DURATION

2 years (starting in mid-August)

LODGING

Living expenses are quite low in Brittany compared to other locations in France, Europe or United States. The total amount does not exceed €6,000 per year (on-campus food and accommodation).

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COMPUTER SCIENCE FOR COMMUNICATION NETWORKS

MASTER OF SCIENCE

ACCREDITATION

Program accredited by the French Minister of Higher Education and Research.

This MSc can lead to enrollment in a PhD program.

KEY WORDS

Network modeling, Network analysis, Virtualization, Software defined networks, Security dependability, SW engineering, Middleware.

SCHOOL PROPOSING THE MASTER

Telecom SudParis

LOCATION

Telecom SudParis has a 12-acre campus situated 35 minutes from the center of Paris and 20 min away from the gorgeous "Forêt de Fontainebleau", thus offering the advantages of both the city and the countryside.

STRONG POINTS OF THE SCHOOL

Telecom SudParis is one of the French leading Graduate Schools of Engineering in the field of Information Technology. More than 60 different nationalities are represented on its campus. Telecom SudParis is a flagship in the French research environment.

Strong links with industry have made it possible for Telecom SudParis to reach excellence in active pedagogy, project-based teaching and top-level research. Telecom SudParis, as a member of Institut Mines-Telecom, is a founding member of the Paris-Saclay University.

INDUSTRIAL PARTNERS (COURSES AND INTERNSHIPS)

Thales, Orange (France Telecom), Bouygues Telecom, SFR, Alcatel-Lucent and Alcatel-Lucent Bell Labs.

LANGUAGE OF TEACHING

Two years totally taught in English.

Intensive courses of French are available for students prior to the MSc program.

ENVIRONMENT

The rapid evolution of the communication networks and the competition between operators and the telecommunication companies demand highly qualified specialists mastering both the technical and the economic parameters of modern networks. The constant need for increasing performance, for mobility and the convergence of computers science and of networks demand that more and more scientists be aware of the last concepts in design and architectures of networks.

OBJECTIVES

The Master gives students the opportunity of being initiated to research and to acquire strong practical and theoretical knowledge in the network and computer science area. The broad range of proposed modules gives students the opportunity to deepen their technical knowledge and discover new emerging research topics.

A number of labs and projects are scheduled for students to practice and assimilate concepts more easily. The projects and the master thesis are useful for testing students' ability and motivation to conduct research and to work well in a team.

PROGRAM

This is a 24-month and full-time program. The first semester is dedicated to networking and computer science fundamentals, and the next two semesters are more advanced and research-oriented modules enriched by three projects. An eliminatory examination is scheduled at the end of the last semester to evaluate the capabilities of students to pursue the program. The fourth semester is for students performing an internship in an industrial R&D laboratory or an academic research laboratory.

All courses are taught in English, but French classes are scheduled for students to improve their French.

1st semester

- > Computer Science
- > Effective Communication
- > Mathematics
- > Wireless Data Networks
- > Computer Networking
- > Software Engineering
- > French as a foreign language

2nd semester

- > Computing Project
- > Engineering for Quality of Service
- > Advanced Formal Software Engineering
- > Object Oriented Computing and Distributed Systems
- > Scientific Project
- > Performance evaluation and Metrics
- > French as a foreign language

3rd semester

Mandatory courses

- > Middleware and distributed Systems
- > Simulation and Metrology
- > Evaluation of network Algorithm Efficiency
- > Research Project

Optional courses

- > Advanced Network Algorithm for the QoS
- > Advanced Performance Evaluation
- > High-Performance computing
- > Network security
- > Probabilistic Model checking and Applications
- > Protocol Testing
- > Software Dependability
- > Software Engineering for Game/Mobile Development
- > Software Testing and Metrics

4th semester

Master thesis carried out in an industrial R&D entity or an academic research laboratory

ADMISSION REQUIREMENTS

1st-class Bachelor's degree or a four-year degree in one of the academic topics offered by the Master's course.

Good background in computer science and basic knowledge in networking are required.

COMPUTER SCIENCE FOR COMMUNICATION NETWORKS

MASTER OF SCIENCE

LANGUAGE REQUIREMENTS

English

When applying, students must provide evidence of proficiency in the English language. This could include:

- > having English as mother tongue
- > work/studies in an English-speaking country
- > English language official qualification such as:
 - TOEFL: 550/677 (Paper-based) or 213/300 (Computer-based) or 79/120 (Internet-based)
 - IELTS: 5.5/9
 - TOEIC: 750/990
 - Cambridge: CAE (Certificate of Advanced English)

French

A good knowledge of French is not mandatory before arrival in France.

Intensive courses of French are available for students prior to the beginning of the program. French language classes are included in the course program.

APPLYING

On-line application at:

<http://www.telecom-sudparis.eu/msc>

COMPETENCES ACQUIRED

Strong practical and theoretical knowledge in the network and computer science area. MSc training also focuses on teamworking, communication skills, innovation and project management.

TYPICAL JOBS

Technical and Commercial Engineers, R&D Engineers.

COST

11,000 Euros

5,000 Euros Europe and Erasmus zone

SCHOLARSHIPS

Scholarships are available depending on academic records and countries of origin (companies, governments, embassies etc.). It has to be mentioned that internships are paid and cover living expenses during the last semester.

DURATION

2 years.

LODGING

Located at the heart of the campus, the Maison des élèves (MAISEL) has 902 comfortable bedrooms and small flats providing accommodation for all students who wish to live on-campus. The monthly rate varies depending on the type of accommodation. Students may be able to claim housing benefit subject to certain conditions.

Services included:

- > Private bathrooms
- > Shared kitchens
- > Washing machines and tumble-dryers • Ironing rooms
- > TV / Games rooms
- > Internet

CONTACT

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DATA ANALYSIS AND PATTERN CLASSIFICATION

MASTER OF SCIENCE

ACCREDITATION

Program accredited by the French Ministry of Higher Education and Research.

This program can lead to an enrollment in a PhD program.

KEY WORDS

Automatic classification, multi-sensor data, signal processing, statistical models, data fusion, computer vision, data analysis, content-based indexing and retrieval, multimedia databases.

SCHOOL PROPOSING THE MASTER

Telecom SudParis

LOCATION

Telecom SudParis has a 12-acre campus situated 35 minutes from the center of Paris and 20 min away from the gorgeous "Forêt de Fontainebleau", thus offering the advantages of both the city and the countryside.

STRONG POINTS OF THE SCHOOL

Telecom SudParis is one of the French leading Graduate Schools of Engineering in the field of Information Technology. More than 60 different nationalities are represented on its campus. Telecom SudParis is a flagship in the French research environment.

Strong links with industry have made it possible for Telecom SudParis to reach excellence in active pedagogy, project-based teaching and top-level research. Telecom SudParis, as a member of Institut Mines-Telecom, is a founding member of the Paris-Saclay University.

INDUSTRIAL PARTNERS

CNES, Renault, Orange, Netral, EDF, Onera, Thales, IFP, Morpho, Miriad Technologies, Self Trade, Asteck, Société générale, Groupe Cyber Sollac Dunkerque, Crédit Agricole, Epargne salariale SA, Air liquide, SNECMA, Clipac, Alcatel, CFT Institut Pierre Simon Laplace, Centre des Environnements Terrestre et Planétaires (CETP/IPSL), Commissariat à l'Energie Atomique (CEA).

LANGUAGE OF TEACHING

This program is taught entirely in English during the first year with intensive French courses in parallel. The second year lectures are taught in French.

ENVIRONMENT

In several applicative areas such as telecommunications, medical imaging, virtual reality, telemonitoring, biometrics, bio-informatics, environmental sciences, banking, insurance, data mining (textual, multimedia), great amounts of data are captured through specialized sensors and must be processed and further analyzed for different purposes related to the application.

Processing such volumes of data, often noisy or degraded, is a big challenge: raw data must be pre-processed to remove the noise, pertinent information (features) must be extracted from the data, which must be stored appropriately and accessed efficiently; this requires to model data in order to label it for classification or prediction purposes. The high-quality courses and projects supervised by professors of TSP and industry-lecturers ensure the possibility of applying for a PhD position in a research laboratory, or a research and development position in industry.

COURSE AIMS

This MSc degree meets the needs of data processing contained in megabases. It is designed to provide the tools allowing processing of all types of real data captured by sensors used in the sectors of genomics, geolocalisation, economics, telemedicine, biometrics, etc.

At the end of the two-year program, students will be able to model real and noisy data, to retrieve information in very large databases, and to conceive complex systems based on such techniques.

PROGRAM

1st semester

- > Computer Science
- > Effective Communication
- > Probability and Statistics
- > Optimization methods
- > Application of Statistical methods
- > French as a foreign language

2nd semester

- > Pattern Recognition & Biometrics
- > Signal Enhancement Methods
- > Safety and secure Operational Systems
- > Advanced Statistical Techniques
- > Scientific Project
- > French as a foreign language

3rd semester

- > Reconnaissance des formes, méthodes neuronales
- > Mise en œuvre des méthodes de reconnaissance des formes neuronales
- > Bases de données
- > Applications Industrielles du traitement statistiques de données
- > Modélisation avancée
- > Traitement d'image
- > Outils d'observation, capteurs

4th semester

This semester is spent developing a research project (Master thesis) in an industrial or university R&D laboratory

ADMISSION REQUIREMENTS

First-class Bachelor's degree or a four-year degree in one of the academic topics offered by the Master's course. Good background in computer science and in mathematics are required.

DATA ANALYSIS AND PATTERN CLASSIFICATION

MASTER OF SCIENCE

LANGUAGE REQUIREMENTS

English

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- > having English as mother tongue
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- > English language official qualification such as:
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 - IELTS: 5.5/9
 - TOEIC: 750/990
 - Cambridge: CAE (Certificate of Advanced English)

French

Students must provide evidence of proficiency in French language by providing a DELF score of B1. Intensive courses of French are available for students prior to the beginning of the program. French language classes are included in the programme.

APPLYING

On-line application at:

<http://www.telecom-sudparis.eu/msc>

COMPETENCES ACQUIRED

High scientific competencies in the related field.

Solid know-how in the practical use of the concepts and technics. Interdisciplinary approach to the field reinforced by a global vision of the different practical situations.

MSc training also focuses on teamworking, communication skills, innovation and project management.

TYPICAL JOBS

Data Scientist, big data, E-health, telemedicine, medical, imaging, bio-informatics, Biometrics, Video-Surveillance, Human computer interaction, Climatology, Geology, automotive, aerospace, researchers in academic and industrial labs.

COST

11,000 Euros

5,000 Euros Europe and Erasmus zone

SCHOLARSHIPS

Scholarships are available depending on academic records and countries of origin (companies, governments, embassies etc.). Internships are paid and can help with living expenses during the last semester.

DURATION

2 years.

LODGING

Located at the heart of the campus, the Maison des élèves (MAISEL) has 902 comfortable bedrooms and small flats providing accommodation for all students who wish to live on-campus. The monthly rate varies depending on the type of accommodation. Students may be able to claim housing benefit subject to certain conditions.

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ELECTRONIC & OPTICAL ENGINEERING

MASTER OF SCIENCE

ACCREDITATION

Internationally recognized Master's Degree in Science and Technology accredited by the French Ministry of Higher Education and Research.
This MSc can lead to enrollment in a PhD program.

KEY WORDS

Fiber optics, Microwaves, Antennas, Computer Networking, Advanced, Devices, Radiation, Photonics, Information Processing, Wireless Systems, Emerging Optical, Technologies, High-bit-rate optical transmission, Satellite Navigation Systems

SCHOOL PROPOSING THE MASTER

Telecom SudParis

LOCATION

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STRONG POINTS OF THE SCHOOL

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Strong links with industry have made it possible for Telecom SudParis to reach excellence in active pedagogy, project-based teaching and top-level research. Telecom SudParis, as a member of Institut Mines-Telecom, is a founding member of the Paris-Saclay University.

INDUSTRIAL PARTNERS

Thales, Alcatel Lucent, CNES, CEA, Laboratoire de photoniques et nanostructures.

LANGUAGE OF TEACHING

This program is taught entirely in English. Intensive courses of French are available for students prior to the MSc program. French is taught as a foreign language.

ENVIRONMENT

New services and equipments are very demanding in high-performance components. Electronics and optics offer new technologies allowing the design of very sophisticated systems towards development of mobile phones, computers, household electricals, etc.

COURSE AIMS

This master aims at preparing experts and specialists in the field of electronics and of optics towards conception and design of communication systems using the very last generation high-performance components.

PROGRAM

The program includes courses over three semesters, followed by an internship of one semester in an industrial or academic research laboratory.

First semester: test and harmonisation

- > Computer science
- > Computing Networking
- > Probability and statistics
- > Microwaves and antennas
- > Fundamentals of Fibre-Optic communications
- > Effective communication
- > French as a foreign language

Second semester: Initial training program

- > Radio and Propagation
- > Long Haul Photonic Transmission
- > Advanced Optoelectronic Devices
- > Microwave project
- > French as a foreign language

Third semester

Refresher

- > Physics and Optoelectronic Devices
- > Communication Networks
- > Digital Communications

Core courses

- > Optoelectronique Devices
- > Digital Information Processing
- > Error-Correcting Codes and Coded Modulations applied to Optical Communications
- > Optical Information Propagation and Point-to-Point Transmission Systems
- > Advanced and Next-Generation Optical Transmission Systems
- > Optical Networks
- > Future Trends in Optical Networks
- > Photonic Systems Towards other Applications

Elective courses

- > Fonction et Intégration Photonique
- > Nanophotonics

Fourth semester

- > Master thesis realized in an industrial or academic R&D laboratory

ADMISSION REQUIREMENTS

First-class Bachelor's degree or a four-year degree in one of the academic topics offered by the Master's course. Good background in computer science and in mathematics are required.

ELECTRONIC & OPTICAL ENGINEERING

MASTER OF SCIENCE

LANGUAGE REQUIREMENTS

English

When applying, students must provide evidence of proficiency in the English language. This could include:

- > having English as mother tongue
- > work/studies in an English-speaking country
- > English language official qualification such as:
 - TOEFL: 550/677 (Paper-based) or 213/300 (Computer-based) or 79/120 (Internet-based)
 - IELTS: 5.5/9
 - TOEIC: 750/990
 - Cambridge: CAE (Certificate of Advanced English)

French

A good knowledge of French is not mandatory before arrival in France. Intensive courses of French are available for students prior to the beginning of the program. French language classes are included in the programme.

APPLYING

On-line application at:

<http://www.telecom-sudparis.eu/msc>

COMPETENCES ACQUIRED

High practical and theoretical knowledge in the optical and electronics science area, with a strong view of application to communication systems.

MSc training also focuses on teamworking, communication skills, innovation and project management.

TYPICAL JOBS

Researchers and Designers in communication systems relying on high-performance optical and electronical components. Technical Support Engineers, Technical and Commercial Engineers, R&D Engineers, Team Leaders, Project Managers, PhD research.

COST

11,000 Euros

5,000 Euros Europe and Erasmus zone

SCHOLARSHIPS

Scholarships are available depending on academic records and countries of origin (companies, governments, embassies etc.). Internships are paid and can help with living expenses during the last semester.

DURATION

2 years.

LODGING

Located at the heart of the campus, the Maison des élèves (MAISEL) has 902 comfortable bedrooms and small flats providing accommodation for all students who wish to live on-campus. The monthly rate varies depending on the type of accommodation. Students may be able to claim housing benefit subject to certain conditions.

Services included:

- > Private bathrooms
- > Shared kitchens
- > Washing machines and tumble-dryers • Ironing rooms
- > TV / Games rooms
- > Internet

CONTACT

Professor François Simon
Director of postgraduate programs.
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AEROMAT • INNOVATION AEROSPACE MATERIALS DESIGN, MANUFACTURING & INNOVATION MANAGEMENT MASTER OF SCIENCE

ACCREDITATION

Accredited by the French Ministry of Higher Education and Research. Decree 20151031, 2015, July 10.

KEY WORDS

Materials, Mechanical Engineering, Processing, Aeronautics & Space, Innovation, Management, International

SCHOOL PROPOSING THE MASTER

Mines Albi (Toulouse economic & academic region). The program is taught in partnership with Télécom École de Management (Evry, Paris)

INDUSTRIAL PARTNERS

Airbus, Safran, Dassault, CNES, Latécoère...

LANGUAGE OF TEACHING

English.

ENVIRONMENT

The economic success of actors in the aerospace industry strongly depends on the ability of companies to develop management strategies for research and development, technology transfer and optimization of the overall manufacturing process. This is a strategic issue in the highly competitive sector of the production of materials and structure for aerospace applications. From a technological point of view, the engineers of tomorrow will develop multi-physics and multi-scale approaches adapted to generate innovation that will emerge at the crossroads of scientific disciplines.

In terms of management skills, they will be able to deploy methodologies and implement complex and global organizational processes integrating a multi-cultural dimension to anticipate and accompany the changes due to an ambitious industrial innovation policy.

COURSE AIMS

AeroMat • Innovation offers challenging opportunities to students interested in developing careers in the aerospace industry with both technical (innovation) and managerial skills by:

- > Training high level master students for the future in engineering and innovation management for industry
- > Promoting teaching in close relationships with research most advanced achievements
- > Favouring multi-cultural, multi-physics and multi-scales approaches
- > Providing multi-choices paths for graduation
- > Opening widely to the international dimension
- > Thinking green and fostering a socially responsible innovative industrial spirit

PROGRAM

This is a full-time program of 2 years divided into four semesters: courses over 3 semesters followed by an internship of one semester in a company or in a research laboratory.

The program is composed of 4 teaching units including an integrated and global approach addressing the specificity of the aerospace industrial sector, the materials science and mechanical engineering and the business and innovation management. Skills and competencies acquired will be utilised for the master thesis in a company or a research laboratory.

1. Aerospace engineering

- > Market, technical and economical analysis

- > Architecture, structure and performance of airplanes, launchers and satellites

- > Aerospace project management, quality management, certification and environment rules for sustainable development

- > Aerodynamics and flight dynamics

- > Manufacturing

- > Space techniques and materials in space environment

- > Innovation in aerospace

2. Materials science and mechanical engineering

- > Strategy for selecting & tailoring materials

- > Modelling & simulation in mechanics of materials

- > Physical properties of materials

- > Additive manufacturing

- > Advanced manufacturing processes

- > Diagnosis and control of materials & structures

- > Microsystems

3. Innovation management

- > Principles of management (introduction, business simulation, multidisciplinary team management, soft skills learning, international negotiation)

- > Innovation management (R&T, technology competition models, technology intelligence, organisation & tools, scientific and technological partnership, innovation measure & metrics, intellectual properties, rights & strategy, technology intelligence with patents)

- > Project management (designing innovation project, response to competitive call for tender, press review)

- > Business management (strategy, value chain, firm network, human resources management, intercultural management, business ethics, supply chain management)

4. MSc Thesis

- > 6-month MSc thesis in industry and/ or research laboratory (France or international).

The program also includes company visits and seminars.

LOCATION

Two semesters (M1S1 & M2S1) will be held on the main campus of Mines Albi (UNESCO's World heritage), part of the Université de Toulouse, the capital city of the French southwest region Midi- Pyrénées, ranked among the 12 most dynamic European regions and enjoys a very active and supportive framework. The Midi-Pyrénées is known worldwide for its businesses and research clusters in aeronautical and space sectors. Toulouse is the centre of the European aerospace industry, with the headquarters of Airbus and many other aerospace companies. Toulouse is consistently ranked high in the cities in which students prefer to study (taking 2nd place behind Paris in 2013). Some classes will be arranged in Toulouse (on-site in industry, laboratories or at the "Maison de la formation Jacqueline Auriol" – Toulouse Aerospace campus). One semester (M1S2) will be fully hosted on the campus of Télécom École de Management, in Evry, close to Paris.

ADMISSION REQUIREMENTS

Participants must hold a 4-year Bachelor of Science degree in the field of engineering (aerospace, materials, mechanical) or sciences (physics, chemistry, mechanics).

Participants holding a first experience in industry are also welcome.

AEROMAT • INNOVATION AEROSPACE MATERIALS DESIGN, MANUFACTURING & INNOVATION MANAGEMENT

MASTER OF SCIENCE

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
- > Bachelor degree taught in English or
- > English test such as TOEFL IBT 80, IELTS

No prerequisite in French, but TEF II or an equivalent level may be required to obtain a visa.

STRONG POINTS OF THE SCHOOL/ PROGRAM

- > Mines Albi is part of Institut Mines- Telecom, an institution under the authority of the Ministry of Industry
- > Télécom Ecole de Management - Evry is double-accredited: AACSB and AMBA
- > Study in Toulouse and Paris regions, the two leading French and European regions for employment and economic activity in aerospace
- > International Faculty
- > Courses taught entirely in English and in small groups
- > Strong links with industry
- > 6-month master thesis in industry or in a research lab
- > Intercultural seminars
- > Free French language courses
- > A MSc program boosted by reputed research departments
- > An international team for international students
- > A quality-chartered "Welcome to International Students" package

COMPETENCIES ACQUIRED

- > knowledge in basic materials science engineering with a particular attention for research applied to industry, economy and society
- > application of the scientific field of materials engineering in the specific field of aerospace structures with an objective of product performance enhancement.
- > understanding of the industrial sector of aeronautics and space in all its technical, economic, organizational dimensions and regulatory issues.
- > understanding of the strategies and methodologies specific to innovation management: management techniques, techniques of lean design, manufacturing and management, communication, change management, performance management, project management, planning techniques, financial analysis and cost management, resource management, risk analysis methods
- > entrepreneurial spirit and an ability to take into account economic, quality, competitiveness and productivity and business requirements
- > ability to lead a complex project in compliance with quality procedures, to take into account the standards and regulation; to develop a sense of responsibility and of decision-making; and an ability to act effectively.
- > a good ability to integrate into real working life, into an organization, to animate and evolve in it: project management, communication ...
- > a strong ability to work in an international context: fluency in English, cultural and international awareness, knowledge of French culture & language
- > good skills in written and oral communication, to present convincingly and argue a case behind an audience, write and present a summary document, communicate and explain decisions

TYPICAL JOBS

- > R & T Operations Manager
- > Engineer with client, supplier and/or research laboratories interfaces
- > Junior Project manager
- > Project procurement/purchasing
- > Lean Management Officer
- > Engineer / Consultant Technology Watch
- > Engineer / Consultant Intellectual Property

COST

11,000 Euros (4 semesters)
5,000 Euros Europe and Erasmus zone Possible partial fee waivers and scholarships.

SCHOLARSHIP

Scholarships are available depending on academic records and countries of origin (companies, governments, embassies...). Internships are paid and cover living expenses during the last semester.

LODGING

Individual furnished studio apartments are available for international students during their stay, both on Albi (Mines Albi) and Evry campus (TEM). Residences offer all the comfort and facilities to the students. Accommodation at the students' Residence costs about 330 Euros per month. Special grants may be given by the french government for helping students to cover lodging expenses. It corresponds roughly to about half of the rent. The total living expenses should not exceed € 5,000 Euros per year (on campus food and accommodation).

CALENDAR

One intake per year in September.

- > Year 1: one academic semester at Mines Albi – Université de Toulouse and one academic semester at Télécom École de Management in Evry - Paris
- > Year 2: one academic semester at Mines Albi - Université de Toulouse and the Master internship and thesis in industry or in a research lab.

CONTACT

Mines Albi and TEM Evry are both part of IMT
Mines Albi – Université de Toulouse
- International students office -
Campus Jarlard - Route de Teillet
- 81013 Albi cedex 9 - France
TEM - International students office - 9, rue Charles Fourier
- 91011 Evry Cedex - France

Website

www.mines-albi.fr/aeromatinnovation

Email

admission.aeromat@mines-albi.fr

Tel. +33 5 63 49 30 78



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ADVANCED NUCLEAR WASTE MANAGEMENT

MASTER OF SCIENCE

ACCREDITATION

The MSc in Advanced Nuclear Waste Management (ANWM) is accredited by the Ministry of Higher Education and Research. National Accreditation Reference: 1701324R

Mention

Nuclear Engineering

KEY WORDS

Nuclear Technology, Energy, Physics, Waste Management, Dismantlement, Decommissioning

SCHOOL OFFERING THE MASTER

IMT Atlantique, a «Grande Ecole» which is part of the Institut Mines-Télécom, a leading French higher Education and Research Institution in Engineering, with 12,500 students.

LOCATION

This MSc program is offered on Nantes campus. Nantes is France's sixth-largest city and capital of the third-largest industrial region. Nantes lies just 50 km from the Atlantic coast; Paris is 2 hours away by high-speed train. Nantes is a dynamic city, which has been frequently recognized for its quality of life. The campus provides all the students facilities: student's residence, sports facilities, wireless network, library, associations, etc.

INDUSTRIAL PARTNERS

EDF, Areva, Andra, Daher...

LANGUAGE OF TEACHING

100% English

ENVIRONMENT

The MSc ANWM is designed to provide skilled and specialized human resources to the European and international states developing nuclear technology and focusing on Dismantlement and Decommissioning of Nuclear installations and Waste management. The combination of scientific and technical skills with management knowledge and strong safety culture (human factor and organizational safety) is meant to put the human being and environment safety as the priority number one.

COURSE AIMS

The MSc ANWM specializes in nuclear waste management. It develops fundamental scientific, technical and industrial knowledge, has a particular focus on the backend of the nuclear fuel cycle, nuclear waste management, long-term safety and environmental impact assessment and provides strong insights on dismantlement and decommissioning of nuclear installations.

PROGRAM

Scientific and technical modules:

- > Physics of Ionizing Radiation
- > Introduction to Nuclear modeling
- > Introduction to Neutron physics
- > Safety and Radioprotection
- > Physico-Chemistry of Environment
- > Introduction to Nuclear Technology
- > Wastes conditioning and storage
- > Dismantlement and Decommissioning of Nuclear Installations
- > Geological disposal

Management modules:

- > Nuclear: Management, Safety and Society
 - > Energy mix and energetic transition
 - > Environmental Management and Strategy of sustainability
- Company visits, Scientific seminars, Technical projects, Generic methods for Engineers, French language & culture

Professional coaching (Student centred process of reflection on competencies and professional objectives)

- > 6-month MSc thesis in Industry or research lab

ADMISSION REQUIREMENTS

This Master is open to applicants with at least a scientific Bachelor of Science degree in a scientific discipline such as Nuclear, Chemistry, Physics, Electrical, Mechanical, Chemical, Energy, Environmental or Civil Engineering. Possible admission directly in the 2nd year for students who have a 4-year Bachelor degree or first year of Master in Nuclear Engineering or Nuclear Physics.

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
 - > Bachelor degree taught in English or
 - > English test such as TOEFL IBT 80, IELTS 6.0, TOEIC 750, Cambridge
- No prerequisite in French

APPLYING

Apply at

<https://sneam.imt-atlantique.fr>

Applications are opened from October to May each year.

STRONG POINTS OF THE SCHOOL

- > MSc accredited by the Ministry of Higher Education and Research
- > International Faculty
- > Masters taught entirely in English and in small groups
- > Strong links with the industries
- > 6-month master thesis in industry or in a research lab
- > Intercultural seminars
- > Free French language courses
- > Master boosted by a research department
- > An international team for international students
- > A quality chart to welcome international students
- > Nantes airport/train station pick up
- > Accommodation available on campus
- > Scholarship based on excellence.
- > French Summer School program in July and August for students who wish to improve French language and culture skills.

ADVANCED NUCLEAR WASTE MANAGEMENT

MASTER OF SCIENCE

COMPETENCES ACQUIRED

- > The master forms engineers exposed to a highly complex scientific environment where technical expertise is omnipresent in the field of nuclear waste management. The program provides:
- > The scientific knowledge necessary for nuclear waste management and the capability to understand how to assess long-term safety and environment impacts.
- > The competencies to master the operational techniques and strategies for the management of nuclear waste.
- > The appropriate solutions according to the type of waste through project work in industry.
- > possibility to build contacts with a large number of international key players in the field.
- > The competencies to master dismantlement and decommissioning of nuclear installations.
- > Societal considerations in the management of nuclear waste with regard to the public acceptance.

TYPICAL JOBS

- > Project engineer related to Nuclear Energy, decommissioning, nuclear waste processing, conditioning, safe storage.
- > Manager of nuclear waste in industrial, hospitals or research institutions.
- > Research scientist and development engineer.
- > Safety engineer for radioactive waste management solutions.
- > Regulators for governmental control of waste management practices.
- > Engineer of international agencies involved in nuclear waste issues.

COST

Participation cost: 12 000 € / year

SCHOLARSHIPS

Special rates for :

- > European students from the Erasmus zone (6 000 € / year)
- > EU Graduate students from our partner universities (3 000 € / year)
- > EU students met at Education fairs (5 400 € / year)
- > excellent EU applications or recommended EU applications (2 600 € / year)
- > Non-EU students graduated from our partner universities (6 500 € / year)
- > Non-EU students met at Education fairs (9 600 € / year)
- > Non-EU Excellent applications or recommended applications (6 000 to 9 000 € / year)
- > Double-Degree students (4 500 € / year)
- > Possible Industrial sponsorship.

CALENDAR

One intake per year in September.

Year 1: Two academic semesters on Nantes campus

Year 2: One academic semester on Nantes campus + 6 month Master thesis in industry or in a research lab.

LODGING

The student's residence (called «MDE») located on campus offers furnished individual rooms. They are 18m2 and equipped with a private bathroom and a small kitchen.

Some rooms for couples are also available. The standard size is 30m2, including a living room and a separate bedroom.

housing-nantes@imt-atlantique.fr

FOLLOW IMT ATLANTIQUE ON SOCIAL NETWORKS

Facebook IMTAtlantique

Twitter @IMTAtlantique

Instagram @imt_atlantique

DETAILS OF SCHOOL

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La Chantrerie
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www.imt-atlantique.fr

Email: sneam-admission@imt-atlantique.fr

Phone: +33 2 51 85 81 50



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IMT Atlantique
Bretagne-Pays de la Loire
Ecole Mines-Télécom

NUCLEAR ENERGY PRODUCTION & INDUSTRIAL APPLICATIONS

MASTER OF SCIENCE

ACCREDITATION

The MSc in Nuclear Energy Production & Industrial Applications (NEPIA) is accredited by the Ministry of Higher Education and Research.

National Accreditation Reference: 1701324R

Mention

Nuclear Engineering

KEY WORDS

Nuclear Technology, Energy, Physics, Reactors, Safety, Nuclear installations

SCHOOL OFFERING THE MASTER

IMT Atlantique, a «Grande Ecole» which is part of the Institut Mines-Telecom, a leading French higher Education and Research Institution in Engineering, with 12,500 students.

LOCATION

This MSc program is offered on Nantes campus. Nantes is France's sixth-largest city and capital of the third-largest industrial region. Nantes lies just 50 km from the Atlantic coast; Paris is 2 hours away by high-speed train. Nantes is a dynamic city, which has been frequently recognized for its quality of life. The campus provides all the students facilities: student's residence, sports facilities, wireless network, library, associations, etc.

INDUSTRIAL PARTNERS

EDF, Areva, Andra, Daher...

LANGUAGE OF TEACHING

100% English

ENVIRONMENT

The MSc NEPIA is designed to provide skilled and specialized human resources to the European and international states developing nuclear technology. The combination of scientific and technical skills with management knowledge and strong safety culture (human factor and organizational safety) is meant to put the human being and environment safety as the priority number one.

COURSE AIMS

The MSc NEPIA specializes in nuclear sciences applications including energy production (power reactors) and industrial applications (E.g accelerators, cyclotrons...).

PROGRAM

Scientific and technical modules:

- > Physics of Ionizing Radiation
- > Introduction to Nuclear modeling
- > Introduction to Neutron physics
- > Safety and Radioprotection
- > Physico-Chemistry of Environment
- > Introduction to Nuclear Technology
- > Basics for reactors
- > Dismantlement and Decommissioning of Nuclear Installations
- > Nuclear materials
- > Operation & maintenance

Management modules:

- > Nuclear: Management, Safety and Society
- > Energy mix and energetic transition
- > Environmental Management and Strategy of sustainability

Company visits, Scientific seminars, Technical projects, Generic methods for Engineers, French language & culture

Professional coaching (Student centred process of reflection on competencies and professional objectives)

- > 6-month MSc thesis in Industry or research lab

ADMISSION REQUIREMENTS

This Master is open to applicants with at least a scientific Bachelor of Science degree in a scientific discipline such as Nuclear, Chemistry, Physics, Chemistry, Electrical, Mechanical, Chemical, Energy, Environmental or Civil Engineering. Possible admission directly in the 2nd year for students who have a 4-year Bachelor degree or first year of Master in Nuclear Engineering or Nuclear Physics.

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
 - > Bachelor degree taught in English or
 - > English test such as TOEFL IBT 80, IELTS 6.0, TOEIC 750, Cambridge
- No prerequisite in French

APPLYING

Apply at

<https://sneam.imt-atlantique.fr>

Applications are opened from October to May each year.

STRONG POINTS OF THE SCHOOL

- > MSc accredited by the Ministry of Higher Education and Research
- > International Faculty
- > Masters taught entirely in English and in small groups
- > Strong links with the industries
- > 6-month master thesis in industry or in a research lab
- > Intercultural seminars
- > Free French language courses
- > Master boosted by a research department
- > An international team for international students
- > A quality chart to welcome international students
- > Nantes airport/train station pick up
- > Accommodation available on campus
- > Scholarship based on excellence.
- > French Summer School program in July and August for students who wish to improve French language and culture skills.

COMPETENCES ACQUIRED

- > Acquire basic knowledge necessary for understanding nuclear energy production (power reactors) and industrial applications, e.g. accelerators, cyclotrons...
- > Develop competences in reactor operation, maintenance and safety issues including radioprotection.
- > Develop competences in particles beams production and qualification.
- > Develop competences in nuclear radiations applications: instrumentation, non destructive control, security...
- > Develop an awareness of societal considerations related to nuclear energy production.
- > Take into account societal issues related to nuclear energy production.

NUCLEAR ENERGY PRODUCTION & INDUSTRIAL APPLICATIONS

MASTER OF SCIENCE

TYPICAL JOBS

- > Project engineer related to nuclear energy.
- > Operation and maintenance engineer in power plant and other industrial applications.
- > Safety engineer in nuclear power plant operation and industrial installations, and environmental controls.
- > Research scientist and development engineer for industrial installations and power plants.

COST

Participation cost: 12 000 € / year

SCHOLARSHIPS

Special rates for :

- > European students from the Erasmus zone (6 000 € / year)
- > EU Graduate students from our partner universities (3 000 € / year)
- > EU students met at Education fairs (5 400 € / year)
- > excellent EU applications or recommended EU applications (2 600 € / year)
- > Non-EU students graduated from our partner universities (6 500 € / year)
- > Non-EU students met at Education fairs (9 600 € / year)
- > Non-EU Excellent applications or recommended applications (6 000 to 9 000 € / year)
- > Double-Degree students (4 500 € / year)
- > Possible Industrial sponsorship.

CALENDAR

One intake per year in September.

Year 1: Two academic semesters on Nantes campus

Year 2: One academic semester on Nantes campus + 6 month Master thesis in industry or in a research lab.

LODGING

The student's residence (called «MDE») located on campus offers furnished individual rooms. They are 18m² and equipped with a private bathroom and a small kitchen.

Some rooms for couples are also available. The standard size is 30m², including a living room and a separate bedroom.

housing-nantes@imt-atlantique.fr

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DETAILS OF SCHOOL

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www.imt.fr

SUSTAINABLE NUCLEAR ENGINEERING - MEDICAL APPLICATIONS

MASTER OF SCIENCE

ACCREDITATION

This Master is accredited by the Ministry of Higher Education and Research.

National Accreditation Reference: 1701324R

Mention

Nuclear Engineering

KEY WORDS

Nuclear Medicine, Radioprotection, Medical physics, Dosimetry, Project Management

SCHOOL OFFERING THE MASTER

IMT Atlantique, a «Grande Ecole» which is part of the Institut Mines-Telecom, a leading French higher Education and Research Institution in Engineering, with 12,500 students.

LOCATION

This MSc program is offered on Nantes campus. Nantes is France's sixth-largest city and capital of the third-largest industrial region. Nantes lies just 50 km from the Atlantic coast; Paris is 2 hours away by high-speed train. Nantes is a dynamic city, which has been frequently recognized for its quality of life. The campus provides all the students facilities: student's residence, sports facilities, wireless network, library, associations, etc.

INDUSTRIAL PARTNERS

CEA, ARRONAX, GE Healthcare...

LANGUAGE OF TEACHING

Year 1 in English,
Year 2 in French

ENVIRONMENT

Nantes is the main center of Western France in the field of medical physics and nuclear medicine, thanks to the presence of important research centers such as the Research laboratory SUBATECH, the cyclotron ARRONAX, the university Hospital of Nantes, etc. Students can benefit from more than ten years of teaching team experience and from the adapted Research environment.

COURSE AIMS

This Master develops fundamental scientific, technical and industrial knowledge of the different nuclear technologies used in the medical field. It has a particular focus on the safety and radioprotection, to be considered in the management of a large project in this field.

PROGRAM

Scientific and technical modules:

- > Physics of Ionizing Radiation
- > Introduction to Nuclear modeling
- > Introduction to Neutron physics
- > Radioprotection
- > Physico-Chemistry of Environment
- > Introduction to Nuclear Technology
- > Nuclear Reactions and Radiations
- > Mathematical Tools and Computer Simulation
- > Dosimetry
- > Medical Imaging Techniques

Management modules:

- > Nuclear: Management, Safety and Society
 - > Energy mix and energetic transition
 - > Environmental Management and Strategy of sustainability
- Company visits, Scientific seminars, Technical projects, Generic methods for Engineers, French language & culture
- Professional coaching (Student centred process of reflection on competencies and professional objectives)**
- > 6-month MSc thesis in Industry or research lab

ADMISSION REQUIREMENTS

This Master is open to applicants with at least a scientific Bachelor of Science degree in a scientific discipline such as Nuclear, Chemistry, Physics, Electrical, Mechanical, Chemical, Energy, Environmental or Civil Engineering. Possible admission directly in the 2nd year for students who have a 4-year Bachelor degree or first year of Master in Nuclear Engineering or Nuclear Physics.

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
 - > Bachelor degree taught in English or
 - > English test such as TOEFL IBT 80, IELTS 6.0, TOEIC 750, Cambridge
- No prerequisite in French

APPLYING

Apply at
<https://sneam.imt-atlantique.fr>
Applications are opened from October to May each year.

STRONG POINTS OF THE SCHOOL

- MSc accredited by the Ministry of Higher Education and Research
- > International Faculty
 - > Masters taught entirely in English and in small groups
 - > Strong links with the industries
 - > 6-month master thesis in industry or in a research lab
 - > Intercultural seminars
 - > Free French language courses
 - > Master boosted by a research department
 - > An international team for international students
 - > A quality chart to welcome international students
 - > Nantes airport/train station pick up
 - > Accommodation available on campus
 - > Scholarship based on excellence.
 - > French Summer School program in July and August for students who wish to improve French language and culture skills.

SUSTAINABLE NUCLEAR ENGINEERING - MEDICAL APPLICATIONS

MASTER OF SCIENCE

COMPETENCES ACQUIRED

- > Acquire the basic scientific knowledge relative to nuclear technologies, necessary for understanding their utility and danger in medical applications.
- > Develop competences in beams production and qualification.
- > Master the operational techniques and strategies for the management of a project in nuclear medicine. Implement appropriate solutions through projects in/with industry.
- > Develop competences in radioprotection and nuclear waste management in the medical environment.
- > Build contacts with a large number of international key players in the field.
- > Develop an awareness of societal considerations related to nuclear medicine.

TYPICAL JOBS

- > Project engineer related to medical installations.
- > Safety engineer in medical installations.
- > Operation engineer of medical installations (radiology equipments, accelerators...).
- > Research scientist and development engineer for medical installations.

COST

Participation cost: 12 000 € / year

SCHOLARSHIPS

Special rates for :

- > European students from the Erasmus zone (6 000 € / year)
- > EU Graduate students from our partner universities (3 000 € / year)
- > EU students met at Education fairs (5 400 € / year)
- > excellent EU applications or recommended EU applications (2 600 € / year)
- > Non-EU students graduated from our partner universities (6 500 € / year)
- > Non-EU students met at Education fairs (9 600 € / year)
- > Non-EU Excellent applications or recommended applications (6 000 to 9 000 € / year)
- > Double-Degree students (4 500 € / year)
- > Possible Industrial sponsorship.

CALENDAR

One intake per year in September.

Year 1: Two academic semesters on Nantes campus

Year 2: One academic semester on Nantes campus + 6 month Master thesis in industry or in a research lab.

LODGING

The student's residence (called «MDE») located on campus offers furnished individual rooms. They are 18m2 and equipped with a private bathroom and a small kitchen.

Some rooms for couples are also available. The standard size is 30m2, including a living room and a separate bedroom.

housing-nantes@imt-atlantique.fr

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