Catalogue of programs taught in English at Université de Lorraine









WE ARE INTERNATIONAL

Université de Lorraine has developed a large range of international activities, including student exchanges, shared degrees, research collaborations and staff mobility, working hand in hand with partners all around the globe. With its 10,000 international students, Université de Lorraine is the leading French university regarding Erasmus mobility.

MAKING LIFELONG LEARNING JOURNEY REAL

Embracing all forms of knowledge, Université de Lorraine provides its 60,000 students with programs in every field, from undergraduate to postgraduate degrees and PhD. We offer tailored solutions to suit everyone's lifelong learning journey.

ENCOURAGING STUDENT ENTREPRENEURSHIP

Université de Lorraine provides a global approach aimed at stimulating entrepreneurship among its students.

BUILDING A STIMULATING ENVIRONMENT DEDICATED TO PHD STUDENTS

Université de Lorraine has built a blossoming PhD scene. **1,800 PhD students, 90 different nationalities, more than 400 PhD theses** defended each year.



Contact: International Relations Office ie-cooperation-contact@univ-lorraine.fr

COMPUTER SCIENCE

- Internet systems and security
- Information systems for the intelligent enterprise •

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- Artificial intelligence and big data
- Digital Web •
- DU Big Data & Data Science
- NLP (Natural Language Processing)

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- Chemical Engineering
- Wood sciences and technology
- Mechanics Materials Processing Structure
- Applied Mechanical Engineering
- BIOWARE: BIOrefinery Engineering of Wood and • Agro-REssources
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COMPUTER SCIENCE



TELECOM -Nancy

1 semester

Master

This major aims at training computer engineers to gain high adaptability skills, as the ability to design and install a business network infrasctruture and its associated software, to secure and ensure a high performance exchange of data.

30 ECTS

Information systems for the intelligent enterprise

TELECOM-Nancy

1 semester

Master

30 ECTS

This major aims at training computer engineers in the analysis, design and developement of information systems for enterprises of different sectors, from business to industry. By analysing data and processes, information systems provide overviews of different levels of granularity of business activities. This set of courses offers modules on industrial artificial intelligence, business intelligence, industry 4.0 and ERP systems.

Artificial intelligence and big data



TELECOM -Nancy

1 semester

Master

30 ECTS



IUT Saint-Dié -Saint-Dié

6 months

Bachelor universitaire de technologie

30 ECTS

This major aims at training computer engineers on how to understand specific problems related to a

profession, in order to elaborate and implement an analysis process using complex and potentially

voluminous data. This specialisation offers modules

on artificial intelligence, data mining, statistics, data

visualisation and tangible projects with real data.

In this academic program, students will immerse themselves in the latest technologies and methodologies, merging cutting-edge computer science with essential communication skills and fundamental mathematics. They will explore the intricacies of web architecture and web services. learning to design scalable and efficient systems that power the modern web. Additionally, they will delve into interactive web rendering, unlocking the secrets of creating immersive and engaging user experiences. They will enhance their global readiness with modules on intercultural communication and business English. They will also strengthen their problem-solving abilities with optimization techniques and automata and languages. It includes an internship in a company.

DU Big Data & Data Science



ENSMN – Nancy Campus Artem

1 year

University Diploma

60 ECTS

The one-year International Program at Mines Nancy focuses on «Big Data and Data Science,» managed by the GIMA department (Industrial Engineering and Applied Mathematics). It's closely associated with renowned research laboratories, IECL and Loria, specializing in Statistics and Computer Science. Courses, primarily conducted in English, integrate French and exchange students, providing a taste of French academic life.

The curriculum dives into the mathematical foundations of Data Mining, Numerical Optimization, and technical architectures for distributed data processing. It covers theoretical concepts and practical applications, ensuring a well-rounded understanding of Big Data and Data Science.

Benefiting from Mines Nancy's GIMA department and IECL/Loria laboratories, students access cuttingedge research, staying updated and contributing to the field. The program blends academic rigor with practical experience, preparing students for datacentric careers across industries.

It fosters a multicultural learning environment, promoting collaboration and learning from diverse peers. In summary, Mines Nancy's International Program offers a comprehensive, immersive experience in «Big Data and Data Science,» equipping students for success in this rapidly evolving field.

NLP (Natural Language Processing)



IDMC - Nancy

2 years

Master

60 ECTS

NLP: AN EXPLODING AND FASCINATING AREA OF SCIENCE, OFFERING MANY CAREER OPPORTUNITIES IN MANY SECTORS SUCH AS INDUSTRY, RESEARCH, EDUCATION...

The goal of NLP is to produce a computational model which simulates our ability to speak and understand « natural » languages such as English, French or Russian as opposed to artificial languages such as programming or mathematics. With the proliferation of digital data, there is a massive need for well-trained engineers and researchers able to exploit this data for commercial (e-commerce, recommendation systems, automatic summarization, multilingual translation, etc) and socio-political (e-learning, opinion mining, behavioral prediction, etc.) purposes.

ENGINEERING

Renewable Energy Engineering



ENSEM - Nancy

1 semester (fall)

Non-graduating master level

30 ECTS

WIND, SOLAR, HYDROGEN, HYDROPOWER: by completing the program in renewable energy engineering at ENSEM you will acquire scientific and technical knowledge on various forms of renewable energy. You will have the opportunity to acquire advanced knowledge in renewable energies, electrical and mechanical energy storage, control, smart and micro energy grids, forecasting and optimization of energy systems. Your training will be very hands-on and you'll have access to specialized equipment: fuel cells, solar panels, wind turbines, hydropower turbines, Grid Converters for Photovoltaic and Wind Power Systems, Multiphase electric machines, micro-grid integrated into our campus, IoT simulator and sensor platforms.

ENSIC is a top ranking French engineering school of

chemical engineering (Université de Lorraine, Nancy) offering advanced training and research in process

engineering, materials, and industrial innovation. 2

specializations are available in English: **«Processes** for the Energy and the Environment» and **«Innovative**

Chemical Engineering

ENSIC - Nancy

1 semester Autumn (September 1st to December 20th)

Master 2

30 ECTS

Wood sciences and technology



ENSTIB - Épinal SEMESTER 1: AUTUMN-WINTER SEMESTER / WOOD FOREST SECTOR / WOOD MATERIALS COURSE 2 semesters **SEMESTER 2**: SPRING-SUMMER SEMESTER / GENERAL USF OF WOOD Master ENSTIB (School of wood science and timber engineering) offers foreign students two international 30 FCTS courses on the theme of "Wood Science and Technology". ENSTIB is the only public engineering school to offer semesters preparing general engineers and researchers to take on the challenges that the wood and forestry sectors, and natural fibres industries face. ENSTIB's constant collaboration with research laboratories, technical transfer centres and industries on Campus makes it a catalyst for

innovation.

Products: from Chemistry to Process»

Mechanics Materials Processing Structure



UFR MIM - Metz

1 year

- Master 2
- 60 ECTS

This master's program is intended for students who desire to pursue a PhD in the fields of mechanics of materials and structures, metallurgy, and materials transformation processes. This high-level scientific training provides skills in technological innovation focusing on innovative multi-materials, industrial systems, and intelligent manufacturing processes specific to the expectations of the industry of the future, including innovative additive manufacturing processes. The orientation aims to prepare students through training and research.

Courses are held on the Metz campus site as well as in Nancy for students of Lorraine INP engineering schools (Polytech and ENSEM).

During one or two semesters, students can choose

from lectures in biomechanics, industrial engineering,

energetics, electrical engineering, and materials

science. Each semester is worth up to 30 ECTS.

Applied Mechanical Engineering



ENIM - Metz

1 year

Mixed

60 ECTS

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BIOWARE:

Wood and

REssources

Agro-

BIOrefinery Engineering of

1 year

Master 2

60 ECTS

Our planet is facing up the depletion of fossil resources while the overall demand of biomass for food and energy is continuously increasing. For one decade, biomass is considered as an alternative energy source contributing to reduce greenhouse effect. Biomass is also a renewable source of proteins, sugars, and fats, which lead to valuable green chemicals, pharmaceuticals, biosourced materials, i.e. to any bio-wares. Biorefinery engineering consists in designing biomass transformation processes to replace conventional chemical transformation.

The master programme offers skills in biorefinery engineering, while accounting for bioeconomy requirements, for sustainability of the agro- and wood resources and soil availability.

Three graduate engineering schools specialised in agricultural sciences, food, chemistry, wood engineering as well as biotechnology share their expertise and their research laboratories in the field of biorefinery to propose a programme combining advanced research and applications.

Nature-Based Solutions in Anthropized Environment: From innovation to implementation



ENSAIA - Nancy

3 months 6 months 1 year

Engineering postgraduate courses (nongraduate)

10 ECTS 30 ECTS 60 ECTS

Postgraduate program dedicated to Environmental Sciences and Engineering that will develop your skills and knowledge to diagnose, manage and reclaim anthropized ecosystems (urban, industrial & mining areas)

3 options:

- Spring School (from April to June): 10 ECTS
 - Basic Knowledge to diagnose and manage the Quality of various ecosystems (watercourse, ecotoxicology, soil pollution)
 - Work Situations through projects management
- Full Semester (from September to March): 30 ECTS
 - Advanced Expertise in Environmental Science and Engineering
 - Urban Agriculture, Restoration of Degraded Lands, Ecotechnology
 - Data analysis, GIS, Life Cycle Assessment
 - Various projects related to Nature Based
 Solutions in Urban Design
- Full Year (from September to August): 60 ECTS
 - Full Semester Program + 6-months Internship in one of our Local Start-ups

(Agromining, Urban Design, Restoration of Degraded Lands, Circular Economy)

Energy Mechanical Engineering Material Science and Environment



POLYTECH -Nancy

1 vear

Bachelor

60 ECTS

Polytech Nancy offers courses taught in English as part of the EMME programme during the first year of the engineering cycle (equivalent to the final year of a Bachelor's degree).

The curriculum includes subjects such as Advanced Mathematics, Statistics, AI in Engineering, Fluid and Solid Mechanics, Interference and Diffraction, Laser and Applications, and Heat Transfer.

Students also take courses in Entrepreneurship and Corporate Law, with the possibility of participating in an Industrial Project.

Innovation Engineering

ENSGSI - Nancy

1 semester (Sept to Feb)

Master

30 ECTS

The courses focus on Innovation Management: decision-making tools, innovation engineering, innovative companies management, agile method, innovation strategy...

GEIR (Geology Energies & Reservoirs Engineering) of Master STP<u>E (Earth,</u> lanetary and Environmental Sciences)

competence:

simulation, taught in English.

French.



NATURAL SCIENCES

RNA and Enzymes Sciences



2 semesters The second year of the

Master



master is in Énglish

60 FCTS

international teaching program in English in the field of RNA Molecular Biology and Enzymology. The primary goal of this Master 2 program (second year of master) is to provide a unique opportunity to study these molecular aspects of cellular metabolism with experts in the field.

Lorraine University in Nancy, France, offers an

The Master 2 program "RNA/Enzymes Sciences" RNAES is underpinned by high-standard scientific environment provided both by the BioPole of Lorraine University and by associated and partner labs in close proximity to Nancy.

The students will acquire both theoretical and practical knowledge in biochemistry, molecular and cellular biology of RNAs and protein enzymes.

PT Forests and their Environment (FEN)



FST - Nancy

1 year Master

This program offers a broad perspective and indepth training on the functioning and dynamics of European forests, providing a basis to address challenges arising from environmental constraints and forest sustainable management in a context of global environmental changes.

60 ECTS

Biomechanics

ENIM - Metz

ENSG - Nancy

1 vear

Master

60 FCTS

1 year

Master 2

60 ECTS

The general aim of this master is, for the students, to acquire knowledge about the biomechanics of the musculoskeletal system and more specifically about the development of patient-specific medical devices. The Master's degree will provide students all the necessary fundamentals to allow them to understand a clinical issue and propose realistic and reliable biomechanical solutions.

M2 GEIR aims to train students in two areas of

Geology of Energies (GE) - characterization and

geological analysis of reservoirs of energy, taught in

Reservoir Engineering (IHR) - hydro-thermodynamic

processes during the exploitation of underground

resources of energy and gas storages, their physical

base, mathematical description and numerical

ECONOMICS

MANAGEMENT

Option Magister Degree Applied Economics

Faculty of Law, Economics and Administration - Metz

2 years

Magister within the Master Applied Economics

120 ECTS



MAE Sustainable Corporate Management

IAE - Nancy

4 semesters 3 theoritical semesters 4th semester: Internship

Master

120 ECTS

The MAE Master in Sustainable Corporate Management (SCM) is a 2-year program fully taught in English and offered by the IAE Nancy School of Management at Université de Lorraine. This program provides students with a comprehensive understanding of key management disciplines and combines theoretical and practical approaches, with a strong focus on sustainability. The program is open to students from various academic backgrounds and from any country. It is specifically designed for individuals with prior education in fields such as engineering, science, law, social sciences or humanities and provides a valuable opportunity to enhance their expertise with essential management skills. The program welcomes applicants who hold a minima a bachelor's degree (or equivalent of 180 ECTS), master's graduates and professionals in continuing education.

ERASMUS MUNDUS

EMERALD

ENSG - Nancy

1 semester

Master

30 ECTS

The EMerald master in georesources engineering aims to train a new generation of engineers with an entrepreneurial mind-set, capable of identifying and sustainably managing the mineral and metal resources that are essential for the green energy transition. With a unique position at the interface between Earth Sciences and Engineering, the goals of the Master formation is finding new, innovative solutions to secure the sustainable supply of raw materials across the value chain: from exploration, mining and extraction, to mineral processing, recycling and the movement towards a circular economy

GREENANO

ENSMN / FST -Nancy

4 semesters

Joint Master

120 ECTS

Language and Communication Technologies (LCT)

IDMC - Nancy + one partner university

4 semesters (1 year at the IDMC and 1 year at a partner university)

Master

120 ECTS

The Erasmus Mundus European Masters Program in Language and Communication Technologies (LCT) is designed to meet the demands of industry and research in a rapidly growing area. It offers education and training opportunities for the next generations of leaders in research and innovation. It provides students with profound knowledge and insight into the various disciplines that contribute to the methods of language and communication technologies and it strengthens their ability to work according to scientific methods. Moreover, the students acquire practice-oriented knowledge by choosing appropriate combinations of modules in Language Technology, Computational and Theoretical Linguistics, and Computer Science. The LCT program prepares professionals to work in the areas of Natural Language Processing (NLP), Artificial Intelligence (AI), Deep Learning and other related fields.

The LCT program involves studying one year each at two different European universities of the consortium. After completing all study requirements, the student will obtain two Master of Science/Arts degrees approved in the respective countries of issue.

GREENANO (Nanomaterials for Green & Digital Transition) is aimed at **preparing highly skilled experts who will be able to tackle the challenges of green and digital transitions**.

Our objective is to train students with a high level in Materials Science, Engineering and Physics with a focus on the phenomena occurring at the nanoscale. Hence, the students will have the necessary background to participate in either the discovery or the production of always more performant energy and electronic devices.

ENSYS 2.0



FST - Nancy

4 semesters

Joint Master

120 ECTS

Erasmus Mundus Joint Master Dearee DENSYS 2.0

is a collaborative two-year joint master degree programme dedicated to the Decentralised Smart Energy Systems, supported by the European Union and developed in collaboration by:

- University of Lorraine (Nancy, France) -Coordinator
- KTH Royal Institute of Technology (Stockholm, Sweden)
- Polytechnic Institute of Torino (Torino, Italy)
- Universitat Politècnica de Catalunya (Barcelona, Spain)

DENSYS also involves 12 associated partners to broaden students' perspectives: major industrial groups, start-ups and spin-offs, academic partners such as ESADE Business School and the University of Liège (Belgium), ETH Zurich (Switzerland), a regional research center, and an association of European research organizations.

DENSYS aims to train engineers and researchers who not only excel in designing innovative energy systems but also grasp the human and societal dimensions of sustainability. By combining fundamental knowledge acquisition, key energy transition technologies, extensive exposure to the humanities, diverse educational pathways, specialization opportunities, challenge-based learning, practical experience, mobility, and cultural exchange, the program empowers its graduates to drive the global transition towards a sustainable and carbon-neutral future.

The program follows a mobility scheme, beginning with two semesters at UL in France, followed by a specialized third semester in one of three distinct domains (at UPC Barcelona, Track in Thermal Energy; at POLITO Turin, Track in Power-to-X; at Inno KTH Stockholm, T rack in Decentralised smart energy systems in a global energy system) and concluding with a Master's thesis in the fourth semester.

Reasoning in Natural Language Processing EMLex

IDMC - Nancy

4 semesters

Master

120 ECTS

- The Natural Language Processing Master EMLex is an international Master's degree programme that
- promotes the international and interdisciplinary training of lexicographers
- teaches lexicographical theories on a high international level
- includes a distinct connection to the practical application of dictionary creation
- brings together students from all over the world

Science in Nuclear Fusion and Engineering Physic



FST - Nancy

4 semesters

Master

120 ECTS

The European Master of Science in Nuclear Fusion and Engineering Physics (FUSION-EP), with its broad network of universities and research institutes, builds upon high-level, multinational, researchoriented education in fusion-related engineering physics. The programme operates in close relation to the research activities of the partners, offering a culturally diverse and academically engaging experience.

The studies in engineering physics are devoted to the technical applications of physical theory and strongly supported by the research activities in the different laboratories within the Consortium. By combining the practical concepts of a degree in engineering with the essentials of education as an engineering physicist, these studies train engineers capable of performing, advancing and leading technical and scientific research in both research institutes and industry. PT Forest and their Environment (FEN)



FST - Nancy

2 semesters

Master

60 ECTS

This program offers a broad perspective and indepth training on the functioning and dynamics of European forests, providing a basis to address challenges arising from environmental constraints and forest sustainable management in a context of global environmental changes.



RNA and Enzymes Sciences

FST - Nancy

4 semesters

Master

120 ECTS

Lorraine University in Nancy, France, offers an international teaching program in English in the field of RNA Molecular Biology and Enzymology. The primary goal of this Master 2 program (second year of master) is to provide a unique opportunity to study these molecular aspects of cellular metabolism with experts in the field.

The Master 2 program "RNA/Enzymes Sciences" RNAES is underpinned by high-standard scientific environment provided both by the BioPole of Lorraine University and by associated and partner labs in close proximity to Nancy.

The students will acquire both theoretical and practical knowledge in biochemistry, molecular and cellular biology of RNAs and protein enzymes.

Decentralized Smart Energy Systems – DENSYS

FST - Nancy

4 semesters

Master

120 ECTS

The programme will provide students with a systemic overview and the ability to dialogue with a large panel of specialists while having solid core competencies. For that purpose, the **"T-shaped"** training profile will be implemented, the vertical bar being the deep core speciality of **multiphysics** engineering, as the horizontal bar represents the mind-opening disciplines that will be taught via a large spectrum of breadth courses (mandatory or elective).

Students are actors of the architecture of their education and thus their skill profiles: they can choose a challenge topic, elective modules, and their 3rd-semester specialization track.

The **organization of summer schools** with the active participation of the students, for organization purposes and taking part in the scientific programme Reinforced **cooperation with industry and other societal actors** as decentralized energy systems implementation requires a close dialogue between industry, energy operators, local authorities and citizens. Industry and social actors will be involved via the challenges and the master thesis internships. The **culture and language component** on all locations of the master: to increase multicultural awareness and mind opening.

FOREIGN LANGUAGES



label,

UFR ALL - Metz

2 years

Master

To train executive-level professionals for managerial positions in the international sectors of banking, international trade, marketing, business administration and human resources. These positions require skills in English and one of the following foreign languages: German, Spanish, Italian or Chinese.

The Master's TeTra has been awarded the

recognition by the European Commission of the

quality of the training offered. The training objectives,

expressed in terms of skills to be acquired, reflect the main skills established by the EMT group of experts.

These skills are organised into five major areas of competence. These positions require skills in English and one of the following foreign languages: German,

EMT(European Master's in Translation)

60 ECTS

Master in Translation Technologies (TeTra)

Master in Foreign

Languages and International Affairs (LEAI)

UFR ALL - Metz

2 years

Master

60 ECTS

Bachelor Applied Foreign Languages

UFR ALL - Metz

3 years

Bachelor

36 ECTS (minimum) This program is taught in English and one of the following foreign languages: German, Spanish, Italian or Chinese. Courses in grammar, professional communication, civilisation, business culture, etc. are taught in the foreign language. In addition to these, there are a number of applied subjects taught in French: economics, law, business, digital and strategic marketing, to prepare students as effectively as possible for the world of business. In L3, all students must complete an 8-week work placement, for which they must write a report and give an oral presentation in language A or B.



UFR ALL - Nancy

2 years Master

30 ECTS / semester



Spanish or Italian.

English for Professional Purposes

UFR ALL - Nancy

1 year

University Diploma for students at BAC+2 or equivalent The DULASP programme, available in Intermediate (B1-B2) and Advanced (B2-C1) levels, provides students with the opportunity to work on English for the professional world. The focus is on practical language skills and professional communication strategies, preparing students to communicate confidently and competently in various workplace settings. The DULASP contains six modules working on the four main skills of professional English: reading, writing, speaking and listening. The courses are taught in English, generally by English native speaker teachers.

Languages and Societies of
the English-Speaking Worlds Image: Constraint of the English-Speaking Worlds trains UFR ALL - Metz The master's degree program in Languages and
Societies of the English-speaking Worlds trains
students to develop the necessary skills to work in

English-speaking culture, tourism, and research in humanities.

120 ECTS Whatever the chosen area, success implies a strong command of basic linguistic, cultural, and communicational skills.







Our website :



Useful information :





