

INTERNATIONAL
BACHELOR

IN MECHANICAL,
MATERIALS AND
AEROSPACE
ENGINEERING





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AN INNOVATIVE INTERNATIONAL PROGRAMME

INSA Lyon, one of France's top engineering universities opened the **International Bachelor's in Mechanical, Materials and Aerospace Engineering (IBMMAE)** in 2016.

The first bachelor's engineering programme to be taught entirely in English in France, the IBMMAE is accredited by the French 'Commission des Titres d'Ingénieurs (CTI) and the Ministry of Higher Education to award the national 'grade de licence' degree.

The IBMMAE is a **three-year undergraduate programme** run in cooperation with leading technological universities in Europe: ECAM Lyon, the University of Strathclyde, Glasgow (UK), and the University of Twente (the Netherlands). The programme offers a unique opportunity to acquire a solid grounding in highly valued engineering fields, gain first-hand professional experience and develop a truly international profile.

All classes are taught exclusively in English by an international team of experienced lecturers and dedicated professionals. Courses are tailored to solving real-world problems through engineering applications with emphasis placed on team and extensive project work.

Course knowledge is consolidated by mandatory industrial internships which are an integral part of the syllabus. The IBMMAE benefits from the support of the **SAFRAN group**, one of the world leaders in aerospace applications.

Students spend a total of 5 semesters at INSA with some courses taught at ECAM, both located in Lyon, and one semester abroad either at the University of Strathclyde or the University of Twente. On completion of the IBMMAE programme students are able to:

- Analyse real mechanical systems to identify their strengths and weaknesses and propose improvements
- Design and develop mechanical systems, particularly in the field of Aeronautics
- Work on projects, autonomously or in teams, within organisations
- Interact and cooperate with specialists in fields other than Mechanical Engineering
- Operate effectively in a multi-cultural environment using English and French
- Establish a professional and personal project.



COURSE STRUCTURE

• Year 1:

Fundamentals of Engineering covering Applied Mathematics, Mechanics, Materials, Electrical Engineering, Mechanical Design, Thermodynamics, Numerical Simulations, Transversal Projects along with French as a Foreign Language, other Foreign Languages or Communication classes or Sport*.

A one-month mandatory training period in a company in July / August.

• Year 2:

Fundamentals of Engineering including Applied Mathematics and Numerical Methods, Strength of Materials, Fluid Mechanics, Production, Kinematics of Mechanical Systems. French/Foreign Language/Communication/Sport*.

Semester 4 abroad – Aerospace/Aeronautics/Aerodynamics oriented electives - taught on the campuses of the University of Strathclyde in Glasgow or the University of Twente in Enschede.

• Year 3:

Applications in Engineering with Machine Elements, Heat Transfer, Propulsion, Experiments and Simulations, Transducers and Measurements, System Control, Composite Materials, and Professional Studies. French/Foreign Language/Communication/Sport*.

Students carry out an extensive final team project proposed by industrial partners or research laboratories. April to July of semester 6 is dedicated to a four-month mandatory industrial internship as an assistant engineer.

* depending on the student's level in French.



CAMPUS LIFE

Accommodation and catering facilities are provided on the INSA campus. Students are guaranteed a room in one of the INSA halls of residence. The campus is equipped with university libraries, high-level sports facilities and a medical centre. INSA Lyon has more than 130 student-run clubs and associations affiliated to the Students' Union.

FEE STRUCTURE

- Application fee (non-refundable): 96€
- Annual tuition fees: 7,300€ for all students regardless of nationality. Payable after admission is confirmed.

NB: There are no scholarships or fee-waivers associated with the IBMMAE programme.

FURTHER STUDIES

The International Bachelor's programme in Mechanical, Materials and Aerospace Engineering enables students to enter the job market directly or to continue with further studies.

On completion of their degree, students will be awarded 180 ECTS (European Credit Transfer System) credits which give access to a number of Master's Programmes.

ON COMPLETION OF THE IBMAE PROGRAMME

Students are awarded 180 ECTS (European Credit Transfer System) and can either enter the job market directly or continue with further studies. Graduates from the IBMAE have received offers on Master's programmes from leading universities worldwide including the following: Imperial College London, Cranfield, Politecnico di Milano, KU Leuven, TU Delft, KTH Stockholm, TU München, Tsing Hua, Colorado Boulder, Cornell, Wisconsin Madison, Concordia, INSA Lyon, ECAM Lyon, Ecole Centrale Lyon (Master's), ISAE-SUPAERO, CentraleSupélec (Master's), ESTACA, ESILV, Institut Polytechnique de Paris, etc.

ENTRY REQUIREMENTS

a) Language requirements:

No minimum level of French is required. All students whose first language is not English must provide proof of English language proficiency at level C1 based on an external internationally recognised test (e.g. IELTS, TOEFL, etc).

b) Academic requirements:

For year 1 entry, the following are minimum requirements:

A-levels: grades AAB (Maths A, Physics A)

IB: 32 Maths and Physics (Maths HL 5 and Physics HL 5)

French Baccalaureate (Maths and Physics required in Terminale) with 13+

USA: High school Diploma with SAT Math (730+) and APs in Calculus and Physics grade 4

India: Year XII score of 75% overall with more than 75% on Maths and Physics

For other qualifications, please contact :

IBEng@insa-lyon.fr



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HOW TO APPLY

Application
deadline:

31st May, 2024

Admission results:

Late June 2024

Applicants must submit copies of their high-school diploma or predicted grades and school transcripts for the last three years, the results of an externally recognised English test if applicable and letters of recommendation from Maths and Physics teachers. No personal statement is required.

For further information,

• please go to

www.insa-lyon.fr/ibeng

• or contact

IBEng@insa-lyon.fr



INSA LYON

INSA Lyon, founded in 1957, is a leading engineering university in Europe which offers top quality training to 5,200 students in 9 different engineering specialities. INSA Lyon is home for 22 research laboratories with more than 600 researchers and teachers, 650 PhD students and is involved in more than 1000 industrial contracts each year.

> www.insa-lyon.fr

UNIVERSITY OF STRATHCLYDE

Founded in 1796 and receiving its Royal Charter in 1964 as the UK's first technological university, the University of Strathclyde is a Scottish public research university located in the heart of Glasgow, United Kingdom. The university is highly ranked in the UK in various subjects and has a very strong reputation in Mechanical and Aerospace Engineering.

> www.strath.ac.uk

ECAM LYON

ECAM Lyon is a top French graduate school of engineering founded on merit, scientific rigor and humanist values.

For over 115 years, ECAM Lyon has provided a multi-disciplinary engineering programme in the tradition of "Arts et Métiers". ECAM Lyon combines a scientific & technical expertise with a social perspective.

> www.ecam.fr

UNIVERSITY OF TWENTE

Founded in 1961, the University of Twente is a world-class research university with proven excellence in new technologies and their impact on society. Located in the lively student city of Enschede, the University of Twente is the only campus university in the Netherlands. The Mechanical Engineering department promotes scientific theoretical knowledge combined with practical skills in a multicultural English-taught learning environment.

> www.utwente.nl/en/

THE CITY OF LYON

With 1.2 million inhabitants, Lyon is the capital city of the Rhone Alps region and the second largest city in France after Paris. In 1998, Lyon received the UNESCO World Heritage Award because of the continuity of its urban settlement over more than two millennia, from Roman times to the present day without losing its distinctive Renaissance feel. Lyon today is one of the most attractive cities in Europe, home to renowned international companies and major decision centres. It is also a gateway to the rest of the world with its international airport and the high-speed (2-hour) TGV train connection to the centre of Paris and Charles-de-Gaulle airport.

INSA Lyon
International Bachelor
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**UNIVERSITY
OF TWENTE.**

In partnership with

