

Graduate School in Electronics,
Computer Sciences,
Telecommunications, Mathematics
and Mechanics

ENSEIRB-MATMECA – Bordeaux INP
(Bordeaux Graduate School in Electronics,
Computer Science, Telecommunications,
Mathematics and Mechanics) is a Bordeaux
INP engineering school that trains engineers in
five scientific disciplines covering the field of
digital technology in broad terms.



A Word from the Director

Our school plays a central role in the major digital transformation of our society, and respond to key challenges facing industry: eco-friendly mobility and transportation, communication, innovative health technologies, smart objects, cybersecurity, functional materials, green energy systems etc. These emerging sectors let our students exploit excellent employment opportunities and career prospects.

As the largest school in Nouvelle-Aquitaine with over 1,200 engineering students, our programmes focus on innovative projects and are supported by world-class research laboratories, which are recognised globally as among the best in their specialisation.

Prof. Eric Kerhervé



6 engineering programmes

Including 2 work-study programmes 

Electronics

Computer Sciences

Telecommunications

Mathematics and Mechanics

Network and Information Systems 

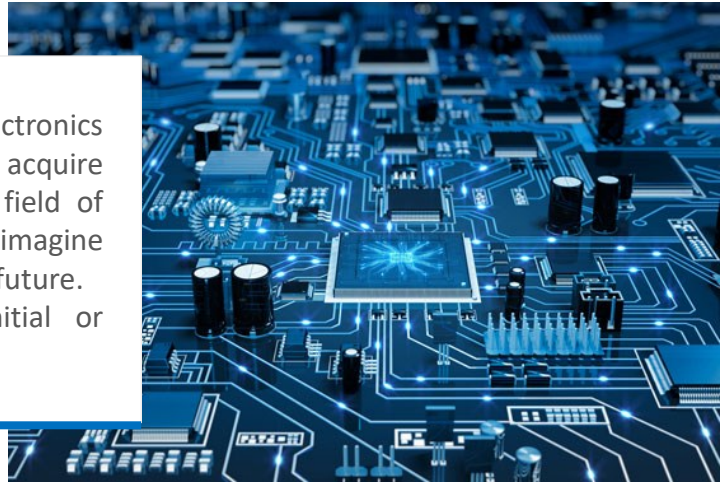
Embedded Electronic Systems 

& 1 Master of Science

- Radio and Telecommunication
Systems

Electronics

The ENSEIRB-MATMECA Electronics programme allows students to acquire technical skills and expertise in the field of Electronics and develop an ability to imagine and design objects and systems of the future. This programme is available as initial or continuing training.



COURSES

1ST AND 2ND YEAR (UNDERGRADUATE)

- Mathematics
- Physics
- General electronics
- Digital electronics
- Mathematics, signals and automation
- Processors and computer science
- Analog/RF circuits and systems
- Engineering languages and culture
- Signal Processing

Student testimonial

For me, the electronics programme was much more than an academic experience; it was a real introduction to the topics companies are interested in today. The skills I gained were useful during my rewarding internships in South Korea and Japan. I specialised in embedded systems and now plan to pursue a PhD in relation to the advanced technologies I discovered during projects.

Vincent

SPECIALISATIONS

3RD YEAR (MASTER)

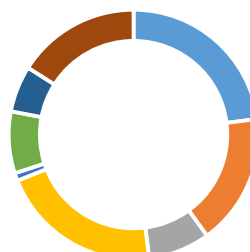
- Integrated circuits and systems
- Telecommunications and radio systems
- Image and signal processing
- Embedded systems
- **Automotive, aeronautics and space automation and mechatronics (ENG)**
- Software development
- Robotics and learning
- **Electronic systems for biomedical engineering (ENG)**

EMPLOYMENT PROSPECTS: 1ST JOB

€40,420
gross
annual

Starting salary
(Class of 2022)

9 out of 10
graduates
Are employed
when they finish
school



- Aeronautics, automotive and space industries
- Information technologies
- Teaching, research
- Studies, consulting
- Financial institutions, banks, insurance
- Telecommunications
- Research and Development
- Other

Computer Sciences

The ENSEIRB-MATMECCA Computer Sciences programme allows students to master the necessary fundamental, theoretical and practical aspects to develop and implement solutions using computers (computers, telephones, computing clusters, robots, communicating objects, machines, cards etc.)



COURSES

1ST AND 2ND YEAR (UNDERGRADUATE)

- Algorithms and mathematics
- Programming and the IT environment
- Programming and systems
- Internet and networks
- Software design
- Systems and applications
- Projects
- Engineering languages and culture

Student testimonial

The close contacts with employers showed me that the technical skills I acquired were perfectly suited for the professional world of today and tomorrow. Thanks to everything I learned, I had no problem finding a pre-employment internship in a field I'm passionate about and where I feel comfortable. The school made this possible, by caring about its students' well-being, and their personal and professional empowerment.

Rémi

SPECIALISATIONS

3RD YEAR (MASTER)

- Software engineering
- Parallelism, regulation and grid computing
- Multimedia technology and video games
- Network and systems cybersecurity
- Robotics and learning
- European studies in software verification
- Innovation economy and industry intelligence
- **Artificial Intelligence (ENG)**

EMPLOYMENT PROSPECTS: 1ST JOB

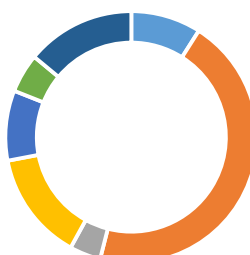
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- Energy
- Other

Telecommunications

The department trains students in the fields of information technology, networks and telecommunications.

In line with the digital transformation of our society, the training program focuses on the deployment of connected objects and smart products that federate information processing and communication with their environment (5G/6G, network virtualization, security, mobile systems, data sciences and machine learning).



COURSES

1ST AND 2ND YEARS

- Computer sciences and networks
- Mathematics of engineering and signals
- Data Sciences
- Machine Learning
- Advanced projects
- Engineering languages and culture

SPECIALISATIONS

3RD YEAR

- Digital communication systems engineering
- Network and telecommunications software engineering
- Networks, security and connected objects
- Multimedia technology and video games

Student testimonial

I originally chose to enrol in the Telecommunications programme for the technical training and its excellent reputation among industry professionals. But I discovered far more than just courses: a wide range of practical group projects, relationships with companies and laboratories, oral presentations in French and English that really helped me grow. All this made it easy for me to find internships and a job.

Simon

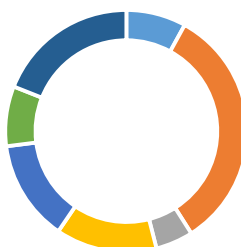
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Starting salary
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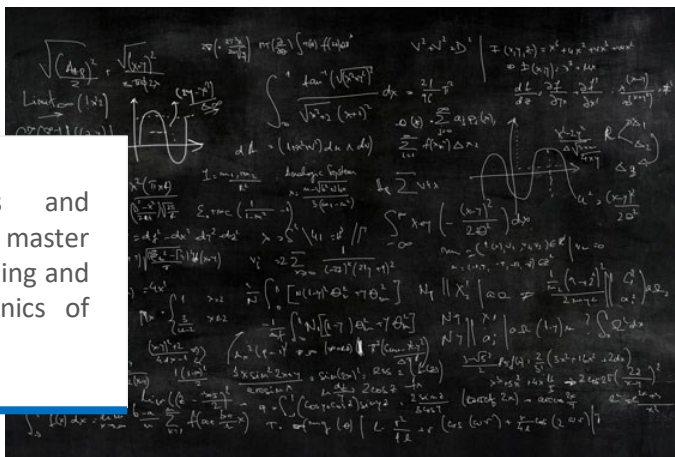
8 out of 10
graduates
Are employed
when they finish
school



- Aeronautics, automotive and space industries
- Information technologies
- Teaching, research
- Studies, consulting
- Financial institutions, banks, insurance
- Telecommunications
- Other

Mathematics and Mechanics

The ENSEIRB-MATMECCA Mathematics and Mechanics programme allows students to master advanced theoretical and numerical modelling and simulation techniques for digital mechanics of fluids and solids.



COURSES

1ST AND 2ND YEAR (UNDERGRADUATE)

- Mechanics of solids
- Mechanics of fluids
- Mechanics of materials
- Mathematics and digital methods
- Software tools for scientific computing
- Study and research work
- Programming
- Engineering languages and culture

Student testimonial

The Mathematics and Mechanics programme prepared me for the professional world by providing me with comprehensive theoretical training, supplemented by work on many projects and real-life applications sought after by companies and laboratories. These assets allowed me to work at Renault for my final project and to continue my work with the company to pursue a CIFRE PhD.

Lalina

SPECIALISATIONS

3RD YEAR (MASTER)

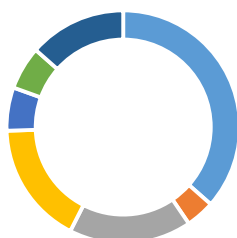
- **Advanced Modelling of Materials and structures (ENG)**
- Fluids and energetics
- High-performance computing for mechanics

EMPLOYMENT PROSPECTS:

1ST JOB

€40,420
gross
annual
Starting
salary
(Class of 2022)

1 out of 2
graduates
Are employed
when they finish
school



- Aeronautics, automotive and space industries
- Information technologies
- Teaching, research
- Studies, consulting
- Financial institutions, banks, insurance
- Energy
- Other

Network and Computer Sciences (work-study)

The ENSEIRB-MATMECA Network and Information Systems (RSI) programme allows students to master communications, digital and computer technologies in order to become information systems architects.



COURSES

1ST, 2ND AND 3RD YEARS

- Engineering sciences
- Networks
- Computer science
- Signal processing and digital communications
- Web development
- Information systems
- Industrial electronic systems
- New network and telecommunications infrastructures
- Industrial networks
- Network and information system management
- Corporate culture
- English language

Student testimonial

The Information Networks and Systems programme provided me with theoretical training and allowed me to apply what I learned in the professional world. The three-year work-study programme gave me experience and maturity and led to my being offered a position at the company where I did my apprenticeship, even before I had graduated.

Yahya

EMPLOYMENT

PROSPECTS:

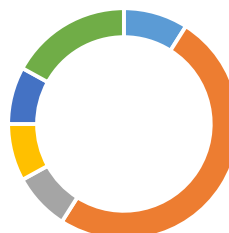
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Starting
salary
(Class of 2022)

9 out of 10
graduates
are employed 3
months after
leaving school

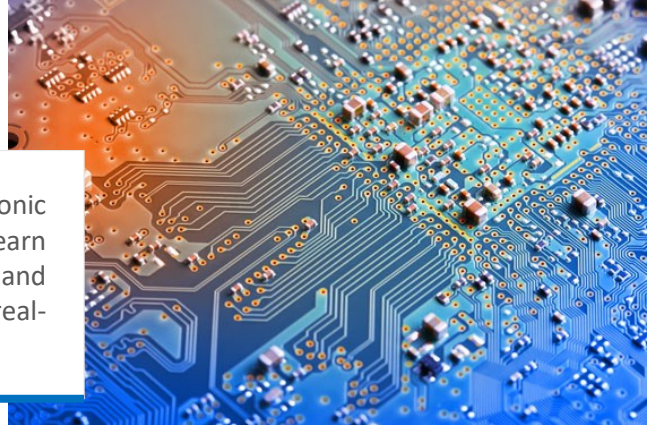
In partnership with



- Aeronautics, automotive and space industries
- Information technologies
- Financial institutions, banks, insurance
- Energy
- Studies, consulting
- Telecommunications

Embedded Electronic Systems (work-study)

The ENSEIRB-MATMECA Embedded Electronic Systems programme (SEE) allows students to learn about the latest electronics, computer science, and communications technologies for intelligent, real-time embedded systems of the future.



COURSES

1ST, 2ND AND 3RD YEARS

- Mathematics
- Analog electronics
- Digital electronics
- Physics
- Computer science
- Microprocessors
- Manufacturing technologies
- Digital systems
- Digital signal processing
- Operations and network systems
- Manufacturing a product
- Implementing embedded systems
- Monitoring tests and tools
- Embedded systems architecture
- System modelling
- Engineering culture
- Languages

In partnership with



Student testimonial

Work-study is the perfect solution for students who want to be independent and get started in the professional world right away. The Embedded Electronic Systems programme allows students to play an active role in the digital revolution.

We're prepared to take on the challenges of the coming decade, such as the Internet of Things or fifth-generation mobile communication technology. The programme also includes designing systems adapted for aeronautics or space industry, which many students are interested in.

Mathieu

EMPLOYMENT PROSPECTS:

1ST JOB

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gross
annual

Starting
salary
(Class of 2022)

6 out of 10
graduates
are employed 3
months after
leaving school



- Aeronautics, automotive and space industries
- Information technologies
- Others

9
graduate
schools*
in France



3500*
students

(selected through
national competitive exam)



12%
international
students

22
programs*
including 8 by
apprenticeship



254
faculty
members



11 joint
research
centers



140
partnerships
worldwide



* Bordeaux INP and its partner schools

BORDEAUX-INP.FR



Research and Transfer

4 JOINT RESEARCH CENTERS

in the following fields: electronics, computer science, telecommunications, mathematics & mechanics.

98 ACADEMICS AND RESEARCHERS

850 m² DEDICATED TO TECHNOLOGY TRANSFER ACTIVITIES

A 400m² "EirLab" FabLab



Employment Prospects:

More than 400 graduates per year

60% of engineering students find a job before leaving school

Gross annual salary **€40,420**



Contacts

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ENSEIRB-MATMECA.BORDEAUX-INP.FR



Industrial partnerships

At ENSEIRB-MATMECA, companies play an essential role in learning.

OVER 110 LECTURERS FROM THE INDUSTRIAL WORLD

A NETWORK OF OVER 2,000 INDUSTRIAL PARTNERS



Clubs and Associations

Over 50 student clubs and associations

Student testimonial

The close contacts with employers showed me that the technical skills I acquired were perfectly suited for the professional world of today and tomorrow. Thanks to everything I learned, I had no problem finding a pre-employment internship in a field I'm passionate about and where I feel comfortable.

The school made this possible, by caring about its students' well-being as well as their personal and professional empowerment.

Rémi