UNIVERSITÉ DE RENNES 1

École associée INSTITUT Mines-Télécom

ENSSAT

LANNION

TÉLÉCOMS ET TECHNOLOGIES ÉMERGENTES

INTERNATIONAL STUDENTS

FRENCH GRADUATE ENGINEERING SCHOOL SPECIALIZING IN APPLIED SCIENCE AND TECHNOLOGY

www.enssat.fr

Electronics Engineering

"Ingénieur" with a wide range of skills in electronics, embedded systems, digital communications and multimedia.

- Digital Signal Processing
  - Digital Audio & Image Processing
  - Source & Channel Coding
  - Digital Communications
  - Adaptive Filter Theory
- Software Engineering
  - Programming
  - Data Structures
  - Distributed Systems
- Electronic Devices & Circuits
  - Processor Architecture & Interface
  - Low-Power Electronics
  - VLSI Integrated Circuits Design
  - System-on-Chip
- Digital Systems
  - Mobile Communication Systems
  - Wireless Networks
  - Multimedia Communications

FIELDS

- design and development of digital electronic systems for multimedia transmission
- telecommunications
- aeronautics and automotive systems
- research

Common core courses in Mathematics, Manage

"Ingénieur Grande École"
(Master in Engineering, Master of Science)

Computer Science

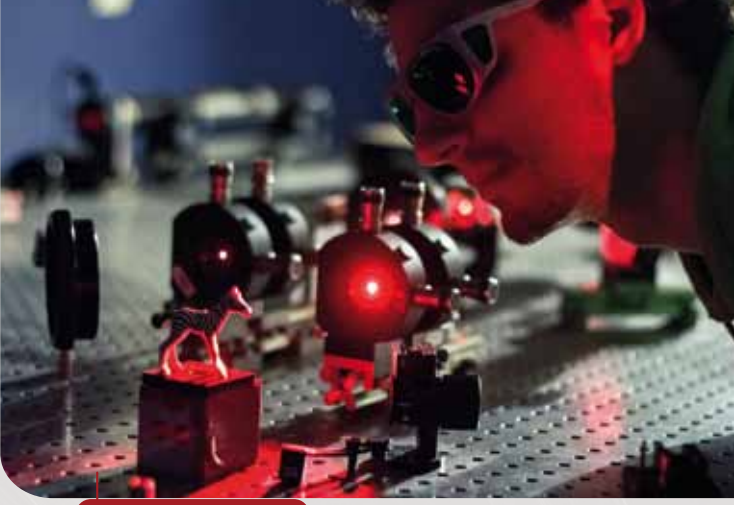
"Ingénieur" specialized in human-machine interaction, information management and cloud computing.

- Software
  - Fundamental programming concepts
  - Data structures Software engineering
  - Embedded software (android development)
- Information Processing
  - Databases
  - Information systems
  - Artificial intelligence
  - Human-machine interaction
- Hardware/Software Interface
  - Digital electronics
  - Architectures
  - Systems
  - Real-time
- Networks and Communication
  - Networks
  - Distributed systems
  - Multimedia streaming
  - Security

FIELDS

- defining, modelling and developing complex systems
- distributed environments
- implementing internet of things
- research

ment, Marketing, English and Sport are required of all EN



Photonics

"Ingénieur" able to design, develop and integrate photonics and optoelectronics systems.

Optics
- Properties of light
- Propagation
- Interferences
- Optical components
- Fibers
- Modulation

Physics
- Light sources
- Lasers
- Detection
- Sensors
- Amplification
- Noise

Electronics
- Analog electronics
- Digital systems
- Interfacing
- Signal processing
- Electronic feedback control systems

Photonics Systems
- Telecommunications and networks
- Instrumentation and metrology
- Industrial applications
- Biophotonics

FIELDS

- telecommunications
- industrial manufacturing
- life sciences and health
- lightening and displays,
- environment and energy,
- aeronautics
- security, defence
- research

SSAT students.

www.enssat.fr

Admission

Graduate engineering students are granted admission to ENSSAT after completion of at least two years of post secondary study.

Admission is highly selective and is based on competitive entrance exams or academic portfolio and interview.

- For application deadlines please contact the Enssat international office: responsable.relations-internationales@enssat.fr

Courses are taught in French.
French courses are offered to all foreign students.

Final year international exchanges

International studies are a major asset for engineering careers. Enssat students are given the opportunity to study abroad thanks to different types of agreements signed with many universities worldwide. Recently students have been to Canada, Vietnam, Denmark, Finland, Germany, Brazil...

Final year industrial internships

All engineering students at ENSSAT are required to spend five months at the end of their course of studies working as interns in industrial or research settings.

Some of our recent industrial partners have been: Orange Labs, Alcatel-Lucent, PSA Peugeot Citroen, Thalès, Airbus operations, Creaform inc. (Canada), Metaio GMBH (Germany), Tyco Fire and Security (India), Union Internationale des Télécommunications (Switzerland)...

ENSSAT
LANNION

Graduate Engineering School
- Master in Engineering
- Master of Science
  (equivalent to a U.S. Master of Science)
- PhD

RESEARCH LABS

- **CAIRN** (Inria / CNRS-Irisa)
  Energy Efficient Computing Architectures
  - heterogeneous multicore architectures
  - high-level synthesis and compiler optimisations
  - hardware accelerators
  - arithmetic, security, fault tolerance

- **SHAMAN** (CNRS-Irisa)
  Symbolic and human-centric data management:
  - understanding data,
  - querying data in a flexible manner,
  - cooperative answering.

- **EXRESSION** (CNRS-Irisa)
  Expressiveness in gesture, text and speech for human-machine communication.

- **Tsi2M** (CNRS-IETR):
  - aerial aquisition (spectroradiometric campaigns) and processing of hyperspectral images,
  - image processing, data analysis and decision making using enhanced information.

- **FOTON** (CNRS-FOTON):
  Specializing in photonics, a key-enabling technology.
  2 teams, 3 platforms. Team "Photonics Systems" at Enssat, focuses research on optical technologies of information: optical telecommunications, sensors, lasers, components using optical or integrated waveguides...

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