





**ESIROI** is the  
University of  
Reunion Island's  
Engineering  
School

ESIROI delivers the well-known «diplôme d'ingénieur», equivalent to a MSc Degree.

The school proposes a two-year induction course which is the main access route to the engineering curriculum in the school's three departments. This specific training aims to provide the two-year scientific background which is the basis required by the engineering cycle.

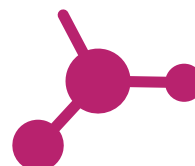
ESIROI offers 3 fields of specialization :

- Food Science and Engineering
- Sustainable Construction and Energy
- Computer Science and Telecommunications

As part of the University of Reunion Island and with support from the Reunion Regional Council, ESIROI benefits from high quality teaching international connections and prime working conditions in terms of equipment and laboratories. The first overseas engineering school to be certified by the French accreditation agency CTI (Commission des Titres d'Ingénieur), it takes up the challenge of excellence and offers its graduates an opportunity to shine the Indian Ocean area and further afield.

Mobility is an absolute necessity for ESIROI engineers. Internships abroad help students gain a better knowledge of foreign languages, open up to the world, enhance their CVs and be part of efficient professional networks.

ESIROI is a member of the Archimède Group, together with some 30 University Engineering Schools. ESIROI has developed specific partnership with AgroSup Dijon, Institut Mines-Télécom and the Polytech group.





## EXTERNAL AND INTERNATIONAL RELATIONS

In order to keep abreast of the issues facing the business world, ESIROI maintains partnerships with numerous industries in Reunion Island, mainland France and abroad.

Each curriculum includes 4 internships assessed on the basis of a report (dissertation) defended by the student before a panel of examiners, as well as an appraisal by the company.

To ensure that ESIROI studies have a truly international dimension, all 3 curricula include mandatory internships abroad.

The aim is to train versatile professionals capable of integrating networks and responding swiftly to any opportunities offered to them.

Our engineering students pursue extremely mobile corporate careers.

## RESEARCH

- > Qualisud : Integrated approach to food quality
- > PIMENT : Physics and Mathematical Engineering for Energy and the Environment
- > LIM : Computer, Science & Mathematics Laboratory
- > LCSNSA : Laboratory of Natural Substance Chemistry and Food Science



## LINKS WITH THE PROFESSIONAL WORLD

- > 13 months' internships including 4 months in English-speaking countries
- > A large part of the curriculum devoted to industrial projects strongly connected to the local context
- > 1 mandatory semester outside Reunion Island (mainland France or abroad)
- > Numerous courses taught by professionals





## AREAS OF ACTIVITY

- Food Science industry
- Technical studies and consultancy
- R&D
- Certification

## OBJECTIVES

This curriculum provides the solid background to :

- Innovate on products and processes by integrating companies' cultural, business and management dimensions
- Design the whole of an agri-food production unit project and organise production
- Carry out analysis and control surveys and implement quality approach in a firm
- Manage a company with reference to its accounting, financial and human aspects

Special attention is paid to food processes in tropical areas: the specificity and variability of raw materials, the optimization of existing technologies in accordance with the qualities of both the raw material and the finished product.

## SKILLS

- Food biological engineering, food quantity analyses, chemical, enzymatic or microbiological degeneration processes
- Food process engineering, factory design and production management
- Fundamentals of engineering science, computing and applied mathematics
- Quality management
- Company management, project engineering, in the Food Science industry economy



## CAREER OPPORTUNITIES

- Industrial R&D engineer
- Research assistant and project officer
- Production engineer
- Industrial quality manager
- Small and medium-sized company and industry manager

## INTERNATIONAL COOPERATION

- Indian Ocean : Madagascar, Mauritius
- International : USA, Canada, Australia, India, New Zealand, Great Britain, Italy







## AREAS OF ACTIVITY

- Construction
- Renewable energy
- Engineering & technical studies
- Contracting authorities and private project sponsors
- Energy sector companies

## OBJECTIVES

Construction and Energy is a multi-disciplinary scientific and technical programme for engineers wishing to work in the tropical environment construction and energy sectors. It provides engineers with high level qualifications in tropical environment project engineering as well as indispensable knowledge and skills to:

- design low-energy sustainable buildings
- develop efficient energy solutions, including renewable energy
- acquire a comprehensive vision of present-day environmental, societal and economic issues
- reduce the impact of construction on the environment, especially in terms of greenhouse gases

The objective is to train engineers in tropical environment building ecodesign in Reunion Island, then to export this know-how to other Indian Ocean countries and worldwide. The challenge we face in the 21st century is how to reduce our greenhouse gas emissions fourfold. As 30% of the world's population live in the inter-tropical zone, energy is a vital issue. ESIROI's Construction and Energy Master's course will guarantee our graduates added value, both at national and international level.

## SKILLS

- Technical and scientific engineering
- Designing sustainable and innovative buildings in the tropical environment
- Designing positive energy buildings in the tropical environment
- Housing stock management and maintenance, energy control
- Project coordination and management

## CAREER OPPORTUNITIES

- Design and consulting engineer
- Sustainable development management engineer
- Energy control and renewable energy R&D engineer
- Community or company-based sustainable development officer
- Energy manager
- Interior works general foreman (air conditioning, renewable energy)
- Technical supervising engineer
- Assistant Engineer to the contracting authority/project sponsor for HEQ buildings



## INTERNATIONAL COOPERATION

- International : School of Architecture, Victoria University, Wellington (New Zealand), Laval University, Polytechnique Montréal and Ecole de Technologie Supérieure Montréal (Canada), University of Wollongong (Australia), Appalachian State University (USA), Dalarna University (Sweden)



# COMPUTER SCIENCE AND TELECOMMUNICATIONS

## AREAS OF ACTIVITY

- Common to various businesses:
  - Software publishers, start-ups
  - SMEs, banks, public authorities and services
- IT: Smartphones, tablets, software packages, knowledge bases...
- Multimedia: Immersive 3D, video games, interactive TV
- Networks & Telecoms: Mobile networks, sensor networks, optic fibre and satellite networks
- R&D: AI, telecom networks, serious games

## OBJECTIVES

The programme's purpose is to train general engineers able to play a part in the changing IT and communication sector. It relies on major Indian Ocean stakeholders of the industry, with courses taught in tandem with mainland France's Institut Mines-Télécom. It aims to:

- Support the development of the IT industry in the Indian Ocean area
- Set up a training/research/development hub of excellence in the field of IT and multimedia networks
- Meet businesses' upgrading needs by offering advanced, European-standard compliant technology in the Indian Ocean
- Provide skills for the creation of high added value, export-oriented innovative activities in emerging domains (digital interactive services, remote geographical information systems, e-health)

## SKILLS

- Designing software and resolving technical problems. Suggesting computer architectures to be implemented and assessing them
- Monitoring and upgrading information system configuration and architecture in businesses or organisations. Advising and assisting IT development or production teams and users in choosing and implementing technical solutions
- Fostering project creativeness

## CAREER OPPORTUNITIES

- Software development engineer
- Multimedia engineer
- Network integrator and manager
- System and IT safety engineer
- Software architect
- IT project manager
- Business information system consultant
- Innovative start-up entrepreneur



## INTERNATIONAL COOPERATION

- Indian Ocean : Madagascar, Mauritius
- International : India, South Africa, Australia





## DURATION OF INTERNSHIPS

FOOD SCIENCE AND ENGINEERING	SUSTAINABLE CONSTRUCTION AND ENERGY	COMPUTER SCIENCE AND TELECOMMUNICATIONS
Induction Course		
1 month		
1st Year Engineering Studies		
2 months minimum		
2nd Year Engineering Studies		
4 months in english speaking business environment		
3rd Year Engineering Studies		
6 months		
TOTAL (minimum)		
13 months		



## LOCATION OF INTERNSHIPS ABROAD







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Réunion Océan Indien

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