The Student Office organises social events all year round and strengthens personal relations through several networks. All this contributes to the development of an ‘Engineering School Spirit’.

- Sports, music, cultural and social events,
- Trips/outings (skiing, climbing and other outdoor activities),
- Humanitarian involvement (Téléthon, AIDS night, etc).

Angers, the Number 1 French city for quality of life!

An exciting and enriching student life!

Located in the heart of the Loire Valley, Angers is a classic French city, with just the right amount of culture, good food and international openings. Tomorrow’s European capital of sustainable development, Angers gives you the lifelong skills to guide you to future success.

- Some not-to-be missed events: European First Film Festival “Premiers plans” in January, “Made in Angers” in February, street festivities “Les Accroches-Coeur” in September, and more.

For more information: www.angersloiretourisme.com
Experiencing the world is the goal of Ìstìa’s degree programs.
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ISTIA – INTERNATIONAL RELATIONS

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49000 Angers - France
Tel. (33) +244 687 542 - Fax (33) +244 687 501
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WWW.ISTIA.UNIV-ANGERS.FR
The Automation and Computer Engineering Department trains operational and versatile engineers for the fields of computer science, automated systems and innovative human-machine interfaces.

Our engineers learn to:

- **integrate information technology** in automated processes (SCADA systems, data exchanges and management, etc.) and in electronic solutions (cyberphysical and embedded systems, connected objects, intelligent sensors, etc.) complying notably with industry 4.0 and smart factories.

- **master software development** using various programming languages, environments and network communications. A specific focus is related to cybersecurity.

- **conceive, develop and assess** virtual reality applications and human, machine and environment interfaces.

Cross-disciplinary skills in human relations, organisation and project management are developed through numerous projects, collaborative work and internships.

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**SOFTWARE DEVELOPMENT**
Software Development and Study Engineer – Network, System or Databases Administrator

**AUTOMATED SYSTEMS**
Automation Engineer – SCADA and Traceability Engineer – Industrial Process Manager – Real-time Engineer – Embedded Systems Engineer

**VIRTUAL REALITY AND HUMAN MACHINE INTERACTION**
Project Engineer – Software Development Engineer – Consultant Engineer in New Technologies – Virtual Reality Environment Designer

**IN IT SERVICES COMPANIES:** telecommunication, application provider, banking, insurance, finance, industrial computing services, augmented reality, virtual environment

**IN AUTOMATION DEPARTMENTS:** energy, mechanics, agri-food, electronics, water treatment, home automation, equipments, robotics, automobile

**IN SERVICE SECTOR COMPANIES:** consulting in computer and digital technologies

This training has a strong international dimension and classes can be taught in ENGLISH.

3 Specialisation Programmes

Control Systems and Industrial Computing
Provides additional knowledge in process control and industrial robotics. Industrial applications and emerging technologies are highlighted.

Human Machine Interface and Virtual Reality
Specific knowledge related to the mastering of advanced technologies in virtual reality is investigated. Developments of HMI solutions are proposed. Applications are related to health monitoring, merchandising, collaborative robotic, ...

Cybersecurity
Considering the increasing reliance on computer systems, the internet and wireless technologies and due to the growth of numerous devices that constitute the internet of things, cybersecurity is one of the major challenges for information technology consulting industry or in manufacturing sector.

3rd Year

- General courses: English – Spanish or German – Economics - Sports – Company Environment - Communication - Management - Accounting – Integration Challenge

- Fundamentals in Engineering: Mechanical Engineering – Operational Research – Industrial Instrumentation – Signal Processing - Introduction to Quality and Innovation - Project


- Project and internship abroad (> 3 months)

4th Year


- Conferences, project and internship (3-4 months)

5th Year

- General courses: English – Industrial Property and Patents – Innovation – Professional Integration – Liability and Risk Prevention - Projects costs management


- 3 Specialisation Programmes:
  - Control Systems and Industrial Computing
    - Advanced Automation – Industrial Robotics – SCADA Systems
  - Human Machine Interface and Virtual Reality
    - Physical Simulation – Interaction and Multi-modality – Modelling and Haptic Rendering – 3D Animation Techniques and Modelling – Behavioural Interfaces - AI
  - Cybersecurity
    - Unix system administration - Networks and architecture - Applied criptology - Computer security - Connected devices

- Conferences, project and internship (3-4 months)

3 COMPANIES THAT HAVE RECRUITED OUR ENGINEERS:


School of Engineering of the University of Angers
International Office: ri.istia@contact.univ-angers.fr
Tel: +33 244 687 542
Our Building Operations-Maintenance and Safety (BS) Engineers provide the internal environmental conditions that enable business processes, all along the building life cycle, to function at an optimum level while providing comfort, health, welfare and safety conditions for occupants. They understand how the engineering, operating and maintaining services influence the performances of buildings, such as energy efficiency.

The BS designers key objective is the trouble-free use of the engineering services of any property operator both in terms of economic, reliable performance and ensuring that legislation is complied with. They use risk assessment methods allowing to anticipate and mitigate the impact of business, design, operation and disposal risks.

The BS engineers have the ability to produce a maintenance contract. They carry out commissioning and testing to ensure that the design intent is achieved in practice. They also determine how to control the building services, the performance of any engineering installation. They are able to implement the maintenance strategy. They have the ability to perform condition surveys and maintenance audits activities.

Building Services and Safety Engineering


Facilities and Property Management


Our graduates can work as head of fire safety; the school is authorised to issue SSIAP 3 certification (Security Services for Emergencies and Personal Assistance, level 3) required for high-rise buildings. They are able to manage risks, organise prevention, supervise safety department organisation and design crisis management processes.
3RD YEAR

General courses

Fundamentals in Engineering
Quality – Projects – Hygiene and Health – Applied Statistics – Design of Experiments

Building Performance

Energy, fluids, environment

Internship abroad (3 months)

4TH YEAR

General courses

Maintenance and Safety Engineering

Management and Law

Steering Tools
Service Quality – Qualification and standards – Energy Manager – Facility Management – Company Policy

Internship (3-4 months)

5TH YEAR

General courses
English - Professional Integration – Occupational Risk Responsibility

Management and Decisions
Project management – Change implementation – Assistance with Decision Making – Risk Management – QSE Management – Health and Building Audit

Building Operation Maintenance and Safety
Commercial Real Estate – Logistics Real Estate – Fire Safety Regulations – Fire Safety

2 specialisation programmes

Internship (5-6 months)

2 SPECIALISATION PROGRAMMES

→ Real Estate Enhancement and Sustainability


→ Operational Risk Management


COMPANIES THAT HAVE RECRUITED OUR ENGINEERS:

Artelia, Eiffage Energies, Apsys, SPIE, Savills, Quadrim Atlantique,
BNP Paribas Real Estate, Apave, Unibail Rodamco, CBRE...
Biology and Health Systems
Master of Engineering Degree

Engineers in Biology and Health Systems become quickly operational in different fields such as health care structures, public health organisations, pharmaceutical, cosmetic, biotechnology or agri-food companies, etc.

Our students acquire scientific knowledge and skills in the field of bioproducts, innovation, quality, risks and project management. Our graduates are able to:

- Conceive, develop and optimize innovating processes and products for the health industry
- Implement appropriate tools and methods for the management of health structures and projects
- Set up and develop Quality methods and optimize logistics
- Identify and measure risks related to health activities and environments

Positions

- PROJECT AND ORGANISATION MANAGEMENT
  Manager and Assistant Manager of Medical and Health Care establishments - Clinical Research Associate - Biomedical research coordinator
- QUALITY AND LOGISTICS
  Quality manager – Risk Management Quality Engineer – Qualification-validation Engineer – Logistics and Flow Manager – Auditor and Quality consultant
- RISK MANAGEMENT
  HSE Manager – Risk Manager – Information Systems and/ or Operation Manager – Manager in Sanitary Quality of Buildings – Coordinator of Sanitary and Energy Renovation of Buildings
- INNOVATION AND PLANNING
  Research Engineer – Project Manager – Product Conception and Development Manager – Production Manager – Regulatory Affairs Manager

- MEDICAL OR HEALTH CARE ESTABLISHMENTS: Clinics, retirement homes, public hospitals: in Management, Quality and Risk Management Department and Clinical Trials
- HEALTH PRODUCTS INDUSTRY: Cosmetics, Pharmaceutical, agri-food, biotechnology, health and nutrition companies: in the Quality, R&D, Logistics, Regulatory Departments
- CONSULTANCY, INSTITUTIONS, PROFESSIONAL BODIES: Quality, Indoor Air Quality, Health and Nutrition Consultant Offices, Health or Audit Agencies, Clinical Trial Companies

3 SPECIALISATION PROGRAMMES

3rd Year

General courses
- English – Spanish or German
- Sports – Drama – Communication Tools and Methods
- Projects:
  - Innovation
  - Real case studies
  - Cross disciplinary projects
  - Professional partnerships
  - Team spirit

Fundamentals in Engineering
- Quality Policy (approach, methods and tools)
- Project Management
- Information Management
- Research and information watch, databases, intellectual property
- Investigation techniques, etc.
- Company Environment

Health and Biology Engineering
- Hygiene and Hazards (agri-food microbiology, water-air-environment, control, cleaning and disinfection, infectious agents and risks)
- Bioproduct Technologies
- Molecular and immunological detection
- Immunotechnology
- DNA technology, bioinformatics, extraction, purification, conservation, etc.
- French Health Care Systems

Applied Study Project
- Individual Professional Project
Internship abroad (3 months)

4th Year

General courses
- English – Spanish or German
- Sports or Drama
- Communication Simulation
- Law and Regulations
- Preparation for Professional Integration

Fundamentals in Engineering
- Quality (HSE management, quality, management, audits)
- Project Management
- Company Environment
- Financial and economic management
- Flow management
- Strategy, marketing, etc.
- Conception, Innovation
- R&D and Production Approaches and Tools
- Conception-innovation
- Automated systems
- Marketing

Health and Biology Engineering
- Hygiene and Hazards (control, GLP/GMP, qualification, validation, traceability)
- Bioproduct Technologies
- Transformation – formulation

3 Specialisation Programs:
- Innovative Engineering of Health Products (IPPS)
- Risk Management in Health Sectors (GRSS)
- Management of Complex Processes in the Health Sector (MPCS)

Applied Study Project
- Individual Professional Project
Internship (4-5 months)

5th Year

General courses
- English
- Sports or Drama
- Communication and crisis management
- Law and Regulations
- Preparation for Professional Integration

Fundamentals in Engineering
- Company Environment
- Project funding and cost management
- Change management, etc.
- Conception
- Innovation
- R&D and Production Approaches and Tools
- Reliability, Performance and Risk Management

Health and Biology Engineering
- 3 specialisation programmes:
  - Innovative Engineering of Health Products (IPPS)
  - Risk Management in Health Sectors (GRSS)
  - Management of Complex Processes in the Health Sector (MPCS)

Applied Study Project
- Individual Professional Project
Internship (5-6 months)

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The Quality, Innovation and Reliability Engineer participates and manages the actions for improving and guaranteeing the overall company performance regarding the products or services, the industrial processes and the organization. The programme aims to train experts in methods for the design of innovative products within a global product life cycle and customer-oriented purpose.

More specifically, the QIF engineer will be able to:

- Implement and lead a quality strategy
- Build technical expertise to guarantee and improve reliability of industrial systems
- Create and develop innovative products and processes
- Offer innovative, technical and organisational solutions to industrial issues

Therefore, the Engineer acquires a global vision of his/her company that will make him/her a real player in the competitiveness and risk management issues.
3RD YEAR

**General courses**
English, German or Spanish, Economic Environment, Sports, Company Organisation, Integration Challenge, Communication, Management, Accounting

**Applied sciences**
Applied Statistics and Dependability, Optimisation (OR), Manufacturing Processes and Materials

**Fundamentals in Engineering**

**Quality and Innovation methods**
Information Research and Patent Documentation, Life Cycle Analysis, Introduction to Innovation and Quality, Problem Solving, Engineering Project, Innovation Methods, Metrology and Quality Control

**Internship in a foreign country (3 months)**

40% of trainers are professionals
50% of trainers are professionals

4TH YEAR

**General courses**
English, German or Spanish, Communication, Sports

**Sciences and Technologies**
Mechatronic and System Engineering, Advanced Spreadsheet, Industrial Optimisation, Computer Engineering, Statistical Methods and Reliability Models

**Methodology**
Risk Analysis Methods, Management System, ISO Approaches (QHSE), Customer and Supplier Relations, Engineering Office Dimensioning, Physical Failure, Maintainability

**Management and Law**

**Projects (Improvement and industry-oriented)**

**Internship in a company (3-4 months)**

3 Specialisation Programmes

- Quality Engineering
- Innovation
- System Reliability Engineering

Industry-oriented project (21 days)

Internship (5-6 months)

5TH YEAR

**General Courses**
English, Professional integration, Global Responsibility and Professional Risk Prevention, Project Cost Management, Performance Analysis, Entrepreneurship

3 Specialisation Programmes

- Quality Engineering
- Innovation
- System Reliability Engineering

Industry-oriented project (21 days)

Internship (5-6 months)

50% projects and collaborative work
50% of trainers are professionals

3 SPECIALISATION PROGRAMMES

- **Quality Engineering**
  Manage complex projects - Identify and implement quality tools for monitoring and improving products and processes

- **Innovation**
  Design innovative products - Manage company knowledge to innovate - Ensure a watch to anticipate future markets

- **System Reliability Engineering**
  Model and design safe operating systems - Assess and validate reliability of computer, electronic and mechanical systems and lay out operational maintenance procedures

COMPANIES THAT HAVE RECRUITED OUR ENGINEERS:

*NEXEYA System, Airbus, Manitou, Magneti Marelli, EADS APSYS, GDF SUEZ, Logica...*