

INSA

INSTITUT NATIONAL
DES SCIENCES
APPLIQUÉES
CENTRE VAL DE LOIRE

INSTITUT NATIONAL DES SCIENCES APPLIQUÉES CENTRE VAL DE LOIRE





LOCATED ON THE BLOIS AND BOURGES CAMPUSES IN THE REGION CENTRE-VAL-DE-LOIRE

INSA CENTRE VAL DE LOIRE TRAINS OVER 5 YEARS

- ENGINEERS
- LANDSCAPE ARCHITECTS
- AND DOCTORS

MULTIDISCIPLINARY, HIGH-LEVEL SCIENTISTS, HUMANISTS,
ENTREPRENEURS AND OPEN TO THE WORLD

PUBLIC ENGINEERING SCHOOL OF THE INSA GROUP:

- **6 INSA:** Centre Val de Loire, Lyon, Rennes, Rouen, Strasbourg, Toulouse
- **1 International INSA:** l'INSA Euro-Méditerranée, in Morocco co-developed with the University Euro-Mediterranée of Fes
- **7 partner schools:** ENSCI Limoges, ENSIAME Valenciennes, ISIS Castres, ENS CMU Mulhouse, ENSISA Mulhouse, ESITech Rouen, Sup'EMR UPUD Perpignan

THE INSA GROUP

- 13 000 engineering students enrolled in the Group's schools
- 2500 engineers, 50 architects and 35 landscape architects who graduate every year
- 10 % of engineers who graduated in France
- 80 000 INSA engineers worldwide
- 1 200 PhD students





INSA CENTRE VAL DE LOIRE

INSA CENTRE VAL DE LOIRE IS A PUBLIC ENGINEERING SCHOOL OF THE INSA GROUP.

5 YEARS OF ENGINEERING TRAINING

A COMMON CORE FIRST YEAR

As for all the institutes of the INSA Group, 75% of the first year's training is based on three major disciplines:

- **fundamental sciences:** mathematics, computer science, physical sciences
- **applied and industrial sciences,**
- **humanities:** languages (two foreign languages), human, economic, legal and social sciences, sport.

The first year takes place on the Blois campus.

A SECOND PRE-SPECIALIZATION YEAR

The second year is still based on the development of the three major disciplines and is supplemented by 170 hours teaching dedicated to the learning of one of the institute's specializations.

Depending on the chosen pre-specialization, this second year takes place in either Blois or Bourges.

THREE YEARS OF SPECIALIZATION

A FIVE-YEAR LANDSCAPE ARCHITECT TRAINING

The training includes scientific and technical courses as well as a cultural and artistic approach, while putting the landscape project at the heart of the learning process.

This training takes place on the Blois campus.



TRAINING AT BAC + 5

1660 students
including **40 PhD**
students



31%
female
students



34%
scholarship
students



17%
foreign
students



15%
apprentices



93,6%
insertion rate
at 6 months



219
staff members and 360
casual professional staff



5
engineering master
degrees including 2
via apprenticeship;
1 State landscape
architect degree



6
research
laboratories

ENGINEERING DEPARTMENTS

- DEPARTMENT
INDUSTRIAL RISK CONTROL (MRI)
- DEPARTMENT
COMPUTER SECURITY
AND TECHNOLOGIES (STI)
- DEPARTMENT
INDUSTRIAL SYSTEMS
ENGINEERING (GSI)
- DEPARTMENT
INDUSTRIAL SYSTEMS
ENGINEERING (GSI)
BY APPRENTICESHIP
- DEPARTMENT
ENERGY, RISKS,
AND ENVIRONMENT (ERE)
BY APPRENTICESHIP

In partnership with the Hubert CURIEN Center for
Apprenticeship (CFSA), Cher Chamber of Commerce

OPENING IN SEPTEMBER 2020

- DEPARTMENT
RENEWABLE ENERGIES
- DEPARTMENT
COMPUTER SECURITY
AND TECHNOLOGIES
BY APPRENTICESHIP

LANDSCAPE ARCHITECTURE DEPARTMENTS

- DEPARTMENT
SCHOOL OF NATURE AND
LANDSCAPE ARCHITECTUREE (ENP)

MASTERS

- COMPUTER SCIENCE - co-accreditation with university of ORLÉANS
- MECHANICS - co-accreditation with universities of TOURS and ORLEANS
- FUNDAMENTAL PHYSICS AND APPLICATIONS - co-accreditation with university of TOURS
- RISKS AND ENVIRONMENT - co-accreditation with university of ORLÉANS



DEPARTMENT **INDUSTRIAL RISK CONTROL (MRI)**

The MRI department trains highly qualified general engineers in the field of industrial risk control. Risks management covers: preventive and remedial actions, respect for work and the environment, corporate responsibility...

The MRI engineer is able to take responsibility for different aspects of risk management inherent to a company and its activities, with the help of hazards science: the cyndinics. This science integrates the representation of hazard methods, its assessment, and its prevention to enable in time the implementation of every needed organizational processes: decision, management, communication, production, assessment, alarm, etc.

Field of study:

- Mechanical engineering
- Energy engineering
- Process engineering
- Automatic control
- Systems engineering
- Robotics
- Image and signal processing

5 OPTIONS:

- Industrial Accidents and Risks
- Nuclear Energy
- Environmental Risks
- Industrial Systems and Risks
- Transport, Production, Robotics

Taught on the Bourges campus

ENGINEERING COURSES

DEPARTMENT

COMPUTER SECURITY AND TECHNOLOGIES (STI)

by learning in September 2020

The STI department trains engineers in the field of computer technologies and cybersecurity to ensure the development and the securing of any information systems.

The curriculum enables to gain a strong technical and scientific background as well as in Humanities and risk management. The STI engineer masters information technologies. He/She can work in every branch of the industry and his/her expertise in computer security gives him/her access to different career paths.

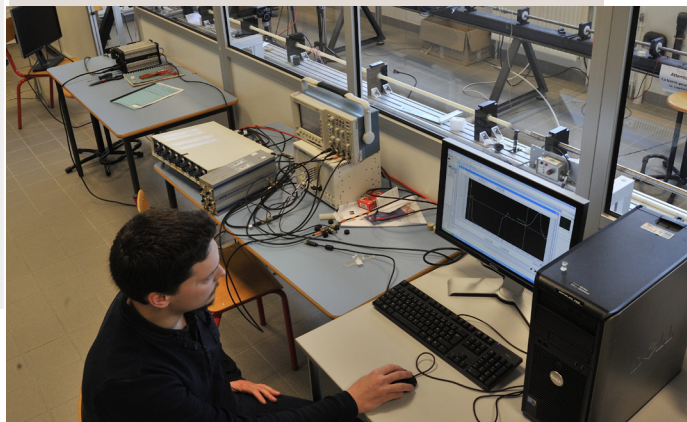
Field of study:

- Computer science
- Computer security
- IT development
- Computer Systems
- Networks
- IT Analysis Methodology

3 OPTIONS:

- Systems Security and Administration
- Software Security and Architecture
- Ubiquitous Computing Security

Taught on the Bourges campus





The course is based on 4 main scientific fields

- **Industrial data processing and Electrical engineering** (automatic control, electronics, ectrotechnology, signal processing, IT, etc.)
- **Mechanical engineering** (CAD, fluid, structural and continuum mechanics, etc.)
- **Mechatronics** (Mechanics, electronics, automatic control and IT for the design and manufacture of new products)
- **Industrial systems management** (maintenance, methods, automated production, quality, environment, dependability, etc.).

4 OPTIONS:

- Automated Systems, Instrumentation and Industrial Data Processing
- Production, Methods, Motor Vehicles, Transport
- Dependability and Industrial Systems
- Industrial Purchases Engineering

Taught on the Blois campus and with the CFSA Hubert Curien for the apprenticeship

DEPARTMENT

ENERGY, RISKS AND ENVIRONMENT

(ERE) By apprenticeship

This training is given in partnership with the Hubert CURIEN Centre for Apprenticeship – Cher Chamber of Commerce.

It trains engineers able to design, utilize and maintain complex systems (human, technical and organizational) that are effective & efficient, safe, reliable and environmentally-friendly.

3 OPTIONS:

- Risk Governance and Engineering
- Engineering for Quality and Sustainable Development
- Energy Efficiency Management

Taught on the Bourges campus

DEPARTMENT

INDUSTRIAL SYSTEMS ENGINEERING (GSI)

By apprenticeship

The GSI training by apprenticeship has a joint curriculum with the GSI as an initial training and is focused on innovation, export, and is international oriented (InnovENT-E) to take into account SMEs' and SMIs' domains of expertise.



TRAINING

LANDSCAPE DESIGNER



DEPARTMENT

SCHOOL OF NATURE AND LANDSCAPE ARCHITECTURE (ENP)

The curriculum is organised around theoretical and practical knowledge on the subject of landscapes, the ability to assess, programming and design, specific to the profession of landscape architect.

Landscape projects are at the heart of the landscape architect's learning process. The skills are gained thanks to all the technological, scientific and plastic arts teaching as part of the landscape project.

This approach is nurtured and enriched throughout the five years of training by creating problematic situations more and more intricate covering phases of analysis and development of the landscape project, but also of the student's personal development.

Five fundamental pillars support the 5-year curriculum:

- Landscape project teaching, through workshops, from 1st to 4th year and in the form of an end-of-study project (TFE) in 5th year
- Scientific and technical teaching
- Engineering science modules in the landscape project
- Human and social sciences modules
- Visual art and representation modules

The five-year course encompasses some 3,700 hours of teaching, in addition to five internships (one per year) and the end-of-study project. Graduates will be awarded the State Landscape Architect Degree (DEP), which is a Master's qualification.

Taught on the Blois campus



SPECIFIC

PATHS

THE NEW PROGRAMS

« ENGINEERS BUT NOT ONLY... »



ENGINEER AND STUDENT ENTREPRENEUR

The national status is opened to students having an entrepreneurial project during their studies. It enables them to benefit from an awareness, training, support and acceleration program dedicated to entrepreneurship.

www.pepite-centre.fr



ENGINEER AND HIGH-LEVEL ATHLETES

The sport combined with studies curriculum is intended for national athletes, whatever the discipline. Handisport athletes and referees are also eligible for this curriculum.



ENGINEER AND BILINGUAL INTERNATIONAL STREAM

This program is opened to first-years of the preparatory cycle. 70% classes are taught in English.



ENGINEER AND MUSIC CURRICULUM

In partnership with the music conservatories of Blois and Bourges, this curriculum is opened to students having a minimum of a Cycle 2 musical practice.



ENGINEER AND PLASTIC ARTS CURRICULUM

In partnership with the Ecole Nationale Supérieure d'Art de Bourges, this curriculum is opened to students interested in plastic arts, without any specific prerequisites.



COMPANIES, OUR PARTNERS

INSA Centre Val de Loire works for a strong and steady development of its collaborations with the business world.

The partnership between companies and the Institute is set in a mutual relationship and based on a long-term strategy through:

1

THE RECRUITMENT OF ITS ENGINEERS

Organization of the Business Forum, conferences, guided tours of companies

2

INTERNSHIPS

The engineer-student benefits from a minimum of 11 months of internship during his/her studies or as many weeks in-company training for apprentices.

3

COLLABORATIVE PROJETS

Industrial missions, study projects, educational contests and technical and industrial services



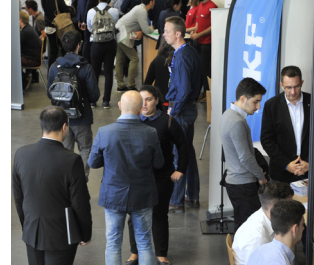
INSA CENTRE VAL DE LOIRE'S PARTNER COMPANIES:

... BOSH AUTOMOTIVE STERRING, CAILLAU, CREDIT ARICOLE, DAHER, EDF, EUREXO, INNOTHERA, PEUGEOT-CITROEN, SENIOR FLEXONIXS, MBDA, AIRBUS CYBERSECURITY, PROCTER & GAMBLE, VINCI ENERGIE, NEXTER, SII.....

ACTIONS ARE ALSO ORGANISED BY THE INSTITUTE TO ASSIST THE STUDENTS IN THE DEVELOPMENT OF THEIR PROFESSIONAL PROJECT:

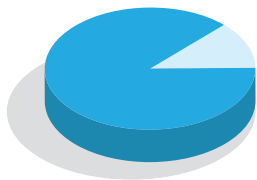
former students' forum, job-interview role-playing, trade conferences, company forum,...as well as a certain number of events to raise their entrepreneurial spirit and awareness of innovation.



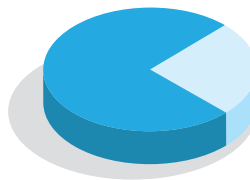


PROFESSIONAL INTEGRATION

PARTNER COMPANIES RECOGNIZE GRADUATES' SKILLS



93.6%
NET EMPLOYMENT RATE



88.7%
HIRED ON A PERMANENT CONTRACT

COLLABORATIVE PROJECTS

LET US BUILD THE TRAINING PROGRAMS OF TOMORROW

1

«INNOVENT-E» (IDEFI)

Training program for the development of SMEs' and SMIs' skills in terms of innovation and export:
www.innovent-e.com

4

CONNECT-IO

MOOC and SPOC on « connected objects » developed by INSA Group, in partnership with Open Classroom.

2

«DISRUPT CAMPUS»

Training the companies for the digital transition, in partnership with the universities of Orléans and Tours, bringing together students, managers and employees of companies dealing with a digital challenge.



3

«GO & CIE»

Led by a consortium of 11 partners from 4 regions: Bretagne, Centre-Val de Loire, Nouvelle Aquitaine and Pays de la Loire, the "Go&Cie" project ambitions to promote companies' creation.

5

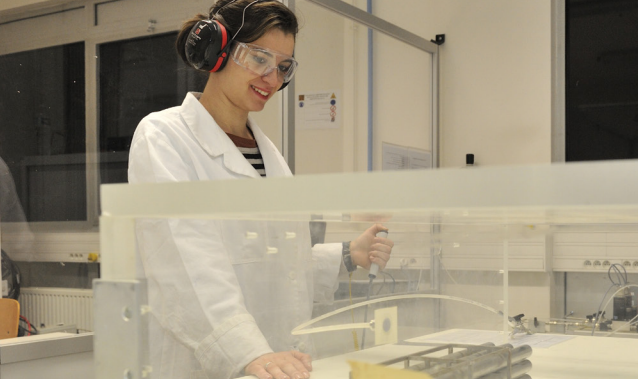
INSA CENTRE VAL DE LOIRE 'S ENDOWMENT FUNDE

Support of students' solidarity, training, research and economic development projects [student scholarships, sponsoring, incubator...]

6

INDUSTRIAL CHAIRS

“ Equal opportunities ” Chair with the RATP Group Foundation
“ Innovation and Entrepreneurship ” Chair with the Credit Agricole Centre Val de Loire
“ Entrepreneurship and digital startup ” Chair with the Credit Agricole Centre Val de Loire



RESEARCH

Research is one of INSA Centre Val de Loire's essential missions. The Institute aims to enhance its relations with the economic world but also to create new knowledge and advance innovation.

This ambition takes the form of most of the professors' dual mission with their teaching and research activities.

Research activities naturally enrich courses pedagogical content and drive innovation.

2 doctoral school:

- MIPTIS: Mathematics, Computer Science, Theoretical Physics and Systems Engineering
- EMSTU: Energy, Materials, Earth and Universe Sciences



INSA Centre Val de Loire AWARDS DOCTORATES FROMS 6 LABORATORIES

GREMAN

Materials, Microelectronics, Acoustics and Nanotechnologies Research Group

[Combined CNRS Research Group under a joint supervision with the University of Tours and CNRS]

LIFAT

Fundamental and Applied Computer Science Laboratory of Tours

[Welcoming team under a joint supervision with the University of Tours]

LIFO

Fundamental Computer Science Laboratory of Orleans

[Welcoming team under a joint supervision with the University of Orleans]

Gabriel Lamé

Mechanics Laboratory

[Welcoming team under a joint supervision with the University of Tours and Orleans]

PRISME

Multidisciplinary Research Laboratory in Systems Engineering, Mechanics and Energetics

[Welcoming team under a joint supervision with the University of Orleans]

CITERES

Cities, Territories, Environment and Societies INSA is partnered with the CITERES laboratory, the University of Tours and the CNRS are responsible for the supervision.

The Institute is involved in 5 competitiveness clusters: Cosmetic Valley, Elastopole, PACA Risk Division, Sciences and electrical energy system [S2E2], ViaMeca. It oversees the National Industrial Risk Cluster [PNRI].





INTERNATIONAL

The international dimension is at the heart of INSA Centre Val de Loire's strategy. It relies on partnerships with institutions of excellence on all 5 continents, not only in the field of research but also of education.



A FEW EXAMPLES OF COLLABORATIONS :

- Universidade Estadual de Campinas, **Brésil***
- Ecole Nationale des Sciences Appliquées de Kénitra, **Maroc***
- Northwestern Polytechnical University, **Chine***
- Victoria University of Wellington, **Nouvelle-Zélande***
- Università Polytechnica de Turin, **Italie***

INTERNATIONAL MOBILITY IS REQUIRED FOR ALL INSA STUDENTS

WITHIN THE FRAMEWORK OF AN INTERNSHIP IN A COMPANY, LANDSCAPE AGENCY OR IN A LABORATORY, AN EXCHANGE SEMESTER OR DOUBLE DEGREE

- A dedicated team supporting students with an international mobility project
- 100% of students end their studies with an international experience (4 months minimum for MRI, GSI and STI departments, 2 months for ERE and ENP departments)
- Double Degree opportunities on all five continents
- A financial support is provided to INSA students, with the help of the Region Centre Val de Loire ["Mobicentre" grants], the Ministry for Higher education, Research and Innovation ["AMI" grants], and the European Commission [Erasmus+ grants].



INTERNATIONAL RESEARCH

- Welcoming foreign PhD students
- Research projects with partner universities
- Inter-governmental cooperation programs
- Teaching provided by foreign teachers-researchers.

WELCOMING FOREIGN STUDENTS:

- 17% of INSA students are foreign nationals
- A training program in English language [Bilingual International Stream]
- A support team for foreign students, PhD students and interns.

DISCOVER

INSA CENTRE VAL DE LOIRE'S

CAMPUSES

A PLEASANT LIVING ENVIRONMENT ON THE CAMPUSES



INSA CENTRE VAL DE LOIRE STUDENTS' ACCOMMODATIONS

Operated by the CROUS, are provided to newcomers on a campus. The rental stock is substantial [new residences are under construction].

CROUS UNIVERSITY RESTAURANTS

are in the two cities.

A HEALTH CENTRE to meet students' needs

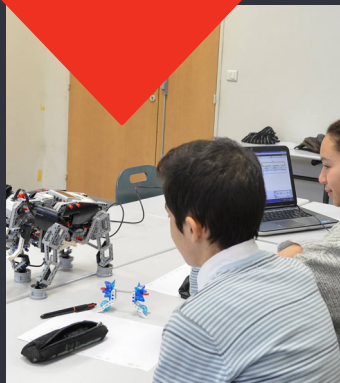
SOCIAL AIDS from INSA Centre Val de Loire depending on students' needs

RATP SCHOLARSHIPS

RATP Group (Paris Transport company) Foundation financially supports students by granting them a scholarship. They are also supported by a RATP executive for the development of their professional and personal projects

EDF SCHOLARSHIPS

Students from the nuclear curriculum can benefit from an EDF Education and Science Program scholarship. These scholarships are allocated based on social criteria and on scholarly excellence.



Students are involved in INSA Centre Val de Loire thanks to a rich and structured student life.

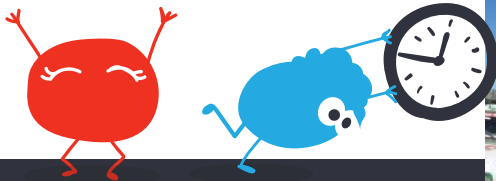
A DYNAMIC ORGANISATION AROUND THE STUDENTS' OFFICE BDE

At INSA Centre Val de Loire, students enjoy an amazing range of activities provided by students' associations.

1 STUDENT OFFICE (BDE), daily available on both campuses and at students' and all associations' service.

5 ASSOCIATIVE THEMATIC POLES [sport, culture, gala, technics, solidarity], around the Student Office, and that provide a tremendous variety of activities, allowing each and everyone to develop their own associative projects.





FOCUS ON STUDENTS' ASSOCIATIONS

“ON INSABILISE” sensitizes students and staff members to the issue of disability, mainly through the training of “HANDI MANAGERS”, but also through the organization of meetings on handisport, and preventive actions on hearing issues

PRINTEMPS DES GRANDES ECOLES, musical student festival, allows 20 selected musical groups to perform on a professional scene of the “Printemps de Bourges” festival.

THE ROBOTICS ASSOCIATION is involved each year in the French Robotics Cup and in the Festival of Science.

THE INFO NIGHT, yearly national competition, allows students and companies to work during an entire night to develop a Web 2.0 application.

THE AIEP ASSOCIATION standing for “Ingenious Association of Landscape Architecture Students”, gathers the Comics club, the Music club, the Screen Print club, the Photo club, the Movie club and the Oenology club. Engineering and landscapers’ students interested in traditional flavours are involved.

IRIS INSA, INSA Junior Entreprise, offers students’ expertise for business consultancy and services and organises the yearly conference gathering the 6 Junior Entreprises from INSA Group.

5 MOUNTAIN PEAKS, 5 CONTINENTS organises each year a sportive and solidarity journey, climbing a mountain peak. Students went recently in Armenia and Georgia: solidarity project for the renovation of a school and 7-day sportive trek.

R³ (standing in French for Realize, Meet and Succeed) and **INSA KIDS** carry out actions for pupils from intermediate and senior secondary schools, to reinforce interest for studies in engineering schools, namely for girls. Most of these actions are part of the «Cordées de la réussite»



AND ALSO ...

OPEN SPACE, conferences for the general public involving personalities such as Sonia Wieder Atherton, Laure Saint-Raymond, André Manoukian, Paul Watson, Réza, Idriss Aberkane, Marie-Amélie Le Fur...

CHOCOLATERIE’S DISCUSSIONS Conferences for the general public on themes related to landscape architects and designers: Gilles Clément, Dominique Marchais, Alessandro Pignocchi, Bernard Fort...





INSA

INSTITUT NATIONAL
DES SCIENCES
APPLIQUÉES
CENTRE VAL DE LOIRE

**INSA CENTRE VAL DE LOIRE
CAMPUS DE BLOIS**

3 rue de la Chocolaterie
CS 23410 - 41034 BLOIS CEDEX
Tél. + 33 (0)2 54 55 84 00

**INSA CENTRE VAL DE LOIRE
CAMPUS DE BOURGES**

88 boulevard Lahitolle - Technopôle Lahitolle
CS 60013 - 18022 BOURGES CEDEX
Tél. +33 (0)2 48 48 40 00

www.insa-centrevalde Loire.fr



MINISTÈRE DE
L'ENSEIGNEMENT
SUPÉRIEUR ET DE
LA RECHERCHE