

**3 WEEKS  
AT  
FRENCH IN  
NORMANDY  
ESIGELEC**



# FOCUS ON TRANSPORT AND ENERGY

Normandy is an historic region, cradle of Impressionism and famous for cheese, whose historic capital city Rouen, “City of a hundred steeples”, boasts a superb architectural and cultural heritage. Yet it is also a region that is resolutely modern. As a major actor in industrial research, Normandy is recognised throughout Europe as a world-class player in the following sectors, pharmaceuticals, transports, energy and digital applications.



In collaboration with:



**FRENCH  
IN NORMANDY**

26 bis Rue Valmont de Bomare  
76100 ROUEN  
FRANCE

tel.: +33 (0) 2 35 72 08 63  
info@frenchinnormandy.com

Within this context of technical excellence, French in Normandy has partnered with ESIGELEC and Campus France to bring you a 3 week program that combines French language tuition with opportunities to enjoy French culture as well as a series of exciting workshops presenting the latest technological developments taught by experts and specialised speakers from the world of scientific research.

**Did you know that the first ever bank payment made with a card fitted with an electronic chip or the first ever transaction by mobile phone fitted with an NFC chip took place in Normandy?**

Normandy is home to over a hundred companies who are all leaders in the field of aeronautics and spatial technology which together form a cluster called “NORMANDIE AEROSPACE ».

Here you will find companies like SNECMA, which builds the Ariane rocket engines, or AIR-CELLE, which produces engine blades and the reverse thrust technology used by AIRBUS. Normandy is also the region that represents over 70% of the companies working in R&D in the automobile industry working together here in the world famous MOV'EO cluster. Last but not least RENAULT's first electric motors were designed in the company's Normandy factory at Cléon just south of Rouen!



**GET 6 ECTS CREDITS WITH THIS PROGRAM**

**ESIGELEC engineering school is one of France's most renowned «Grande École»** and is specialized in embedded systems and artificial intelligence, offering courses at first degree, Masters and PhD levels in both French and English.

**The school has a special research section in embedded systems (IRSEEM) and develops industrial applications using the latest and most innovative technologies for solutions adapted to the automobile, aeronautic and electro-telecommunications sectors.**

**French in Normandy**, an award winning French language school, recognized by the French Government Quality label and member of Groupement Fle, International House and IALC, welcomes over 1500 students every year from more than 60 different countries for both long and short term language courses.



### COURSE CONTENT

30 HOURS PER WEEK

- **French as a foreign language: 15 hours per week**
  - acquisition or enhanced language, communication and intercultural skills
  - improve grammar and syntax
  - improve written and oral expression
- **Science and technology: 15 hours / week**
  - hands on sessions in the lab
  - build your own smart robot
  - be part of a winning team in competition with French students
- **Interactive visits and thematic conferences: 10 hours / week**
  - visit innovative research labs!
  - meet with experts from the industrial world!
  - discover Normandy's world leading companies!

*Non-contractual program, subject to change.  
A minimum of 10 students is required.*



Duration

**3 WEEKS**



Location

**ROUEN**

**PERIOD:** 8<sup>th</sup> to 26<sup>th</sup> June 2020

French ⊕ Sciences & University housing

**€2,100**

French ⊕ Sciences & Host family

**€2,100**

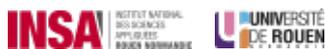
French ⊕ Sciences & Private apartment

**€2,270**

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## WEEK 1



MONDAY, JUNE 8

- > **Morning** French language course at French In Normandy
- > **Afternoon** Interactive conference at ESIGELEC Graduate School of Engineering: New world challenges in Aeronautics & Space

Main actors, new technologies, strategic issues and job opportunities



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TUESDAY, JUNE 9

- > **Morning** French language course at French In Normandy
- > **Afternoon** Visit ESIGELEC Graduate School of Engineering and make your own smart robot

Under the supervision of a professor from ESIGELEC, within 6 practical sessions, you will be offered the opportunity to build and develop a smart embedded system, responding to specifications.

**Session 1:** Specifications and assembly of your smart little robot.



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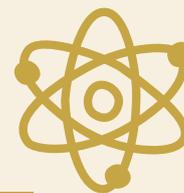
WEDNESDAY, JUNE 10

- > **Morning** French language course at French In Normandy
- > **Afternoon** Visit a nuclear power plant in Normandy

Discover Nuclear Energy (which is the main source of energy in France) through a conference and the visit of some parts of the installations of a nuclear power plant.



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THURSDAY, JUNE 11

- > **Morning** French language course at French In Normandy



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- > **Afternoon** Make your own smart robot at ESIGELEC Graduate School of Engineering

**Session 2:** Presentation of the software tools used to develop the programs which will be implemented in the robot, and brain storming on strategies to be used to respond to the specifications.

FRIDAY, JUNE 12

- > **Morning** French language course at French In Normandy
- > **Afternoon** Visit one of the biggest industrial plant of a famous French car manufacturer

Automobile industry is one of the domains of expertise of France. Let's visit and discover a huge industrial plant for engine assembly.



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SATURDAY, JUNE 13

- > **All day** Excursion to Bayeux and to D-Day beaches



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# WEEK 2

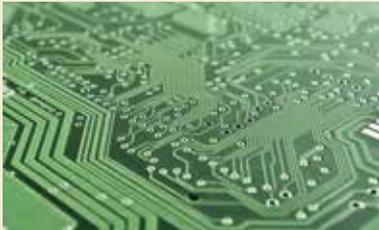
## FRENCH IN NORMANDY ESIGELEC

### NORMANDY

#### MONDAY, JUNE 15

- > **Morning** French language course
- > **Afternoon** Make your own smart robot at ESIGELEC Graduate School of Engineering

**Session 3:** Development of the program in C language to be implemented in the robot.



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#### TUESDAY, JUNE 16

- > **Morning** French language course
- > **Afternoon** Visit of the GPM laboratory (Materials Physics Group) of the University of Rouen Normandie

Research and Control of Nuclear, Aeronautic, Automobile, Electronic materials at the atomic scale



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#### WEDNESDAY, JUNE 17

- > **Morning** French language class
- > **Afternoon** Make your own smart robot at ESIGELEC Graduate School of Engineering

**Session 4:** Development of the program in C language to be implemented in the robot.

#### THURSDAY, JUNE 18

- > **Morning** French language course
- > **Afternoon** Visit a research lab for Embedded and Electronics Systems at ESIGELEC

4 research platforms in close interaction with the aeronautic, automobile and electronic sectors.

**Expertise:** EMC, Autonomous Navigation, Hybrid Vehicules, etc ...



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#### FRIDAY, JUNE 19

- > **Morning** French language course
- > **Afternoon** Make your own smart robot at ESIGELEC Graduate School of Engineering

**Session 5:** Development of the program in C language to be implemented in the robot.



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#### SATURDAY, JUNE 20

- > **All day** Excursion by train to Paris to visit "La Cité des Sciences" (La Villette) and free afternoon in the capital of France



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# WEEK 3

#### MONDAY, JUNE 22

- > **Morning** French language course
- > **Afternoon** Visit of LINEACT Industry of the Future research lab of CESI

Learn how transport is optimised in factory workshops with the help of robot behaviour simulation and by using Autonomous Guided Vehicles.

**Expertise :** AGV, Transitec Activities, Game theory, Smart Transport



© CESI

#### TUESDAY, JUNE 23

- > **Morning** French language course
- > **Afternoon** Make your own smart robot at ESIGELEC Graduate School of Engineering

**Session 6:** Development of the program in C language to be implemented in the robot.

- > **Evening** Reception at "Normandy Attractivité" or "Région Normandie" or "Rouen Town Hall"

#### WEDNESDAY, JUNE 24

- > **Morning** French language course
- > **Afternoon** Workshop for Active Learning at CESI

Experience Project/Problem Based Learning through a real life case on power generation. Observe and exchange with experts. Present your group's innovative finding at the end of the workshop.

**Expertise:** PBL, Power Generation, ...



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#### THURSDAY, JUNE 25

- > **Morning** French language course



- > **Afternoon** Visit INSA Rouen Normandie and a research lab CORIA [www.coria.fr](http://www.coria.fr)

CORIA's research areas cover fundamental and applied studies on reactive and non-reactive flows: two-phase flows, turbulent mixing phenomena, combustion, plasmas, etc. This research has applications in the fields of energy and transport.

#### FRIDAY, JUNE 26

- > **Morning** French language course



- > **Afternoon** Make your own smart robot at ESIGELEC Graduate School of Engineering

**Session 7:** Tests and competition involving all the robots. A prize will be awarded to the winner team.

#### SATURDAY, JUNE 27

- > **Departure**