

**FRENCH**

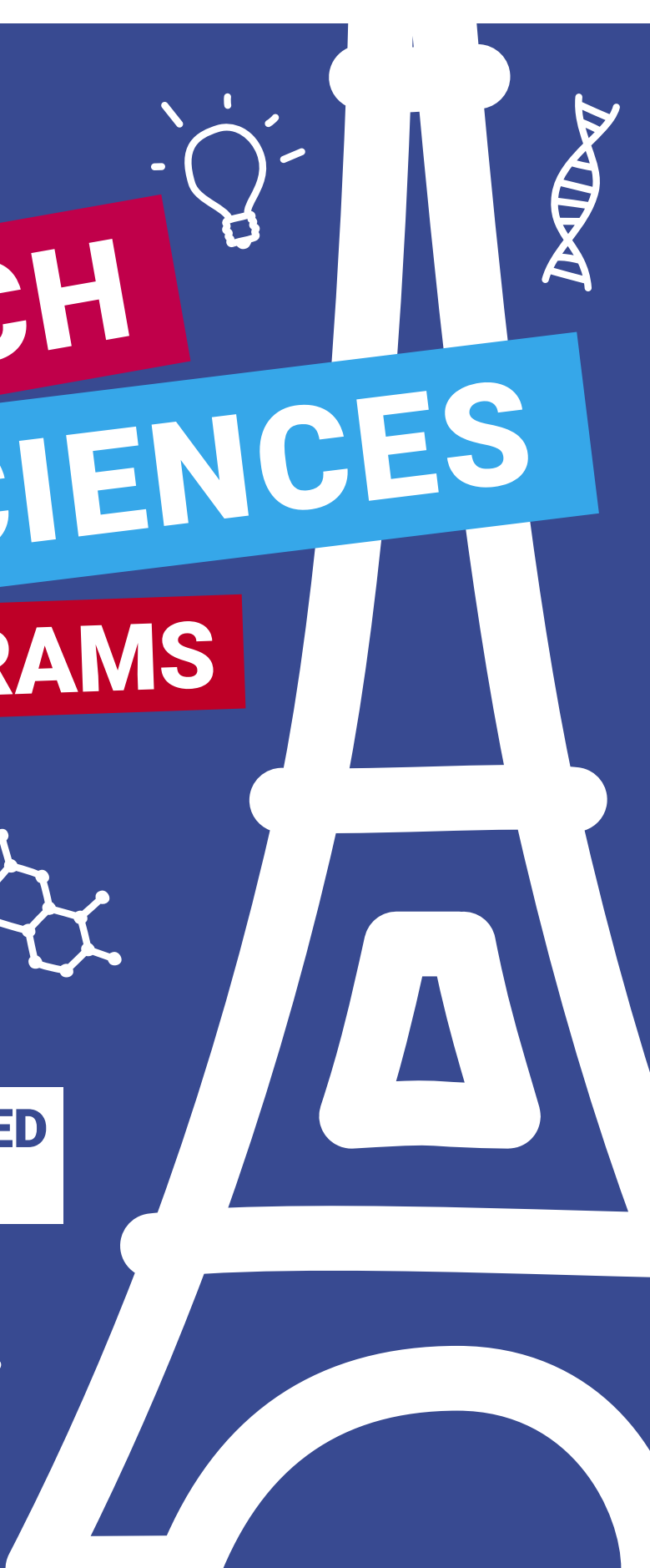


**SCIENCES**

**PROGRAMS**



**A RESEARCH-BASED  
APPROACH**

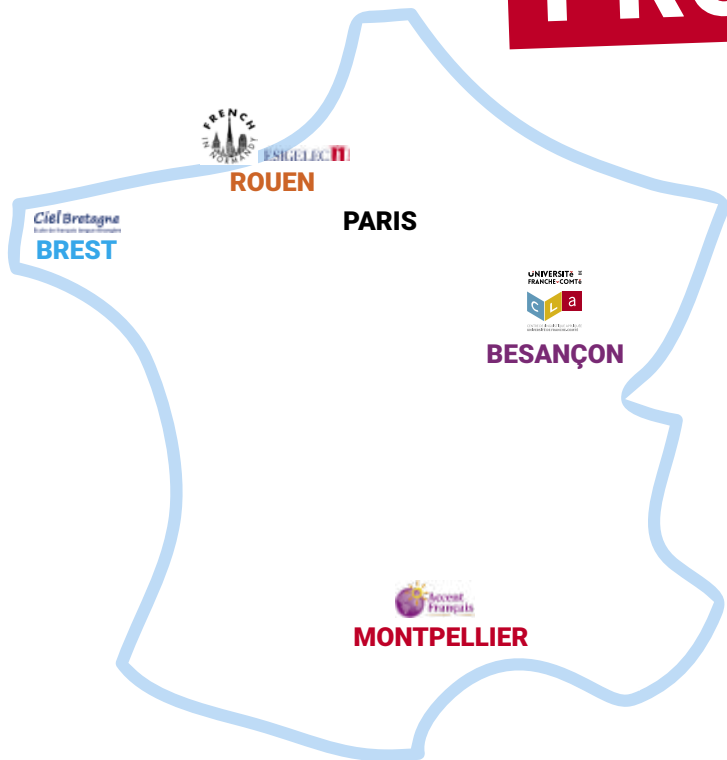


**CAMPUS  
FRANCE**  
[campusfrance.org](http://campusfrance.org)



# THE FRENCH + SCIENCES

# PROGRAMS



**4**

## 3 WEEKS AT ACCENT FRANÇAIS, MONTPELLIER

FOCUS ON SUSTAINABLE DEVELOPMENT

With its long and proud tradition of science and higher learning, Montpellier is internationally renowned for research in the fields of health, agronomy, and the environment. It is also the birthplace of modern medicine.



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**8**

## 3 WEEKS AT CIEL BRETAGNE, BREST

SCIENCE AND TECHNOLOGY OF THE SEA

Ciel Bretagne offers English-speaking students with beginner-level French a program of visits to companies and state-of-the-art laboratories (conducted in English), conferences on current and future challenges facing the engineering professions, and courses in French as a foreign language. The program also includes a wide selection of excursions and cultural visits.



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**12**

## 3-4 WEEKS AT CLA, UNIVERSITÉ DE FRANCHE-COMTÉ, BESANÇON

MICROTECHNOLOGY AND BIOMEDICAL ENGINEERING

The Center for Applied Linguistics (CLA, Centre de linguistique appliquée) offers a program of language, cultural, and scientific immersion on the topic of microtechnology and biomedical engineering.



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## 3 WEEKS AT FRENCH IN NORMANDY AND ESIGELEC

FOCUS ON TRANSPORT AND ENERGY

Normandy is an historic region, cradle of Impressionism and famous for cheese, whose 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.



© Rouen Normandie Tourisme & Congrès - photo of Lorange



## PARTICIPANTS\*

Undergraduate (bachelor's level) students seeking a period of language, scientific, and cultural immersion in France.

Language requirements:

> **In French:** beginner (or better) > **In English:** level B2 required



## OBJECTIVES

> **To explore** scientific and technical cutting edge sectors through site visits to companies, conferences and encounters with specialists in the field

> **To acquire or improve** communication skills in French

> **To discover** four of the most beautiful regions of France

\* 10 students minimum required



**French ⊕ Sciences is designed for international English-speaking students in Sciences, who may be complete beginners in French: the scientific content is 100% taught in English.**

**This 3- to 4-week program:**

- > Creates a scientific dynamic ;
- > Brings together innovators, entrepreneurs, start-up, scientists, educators, and researchers ;
- > Gives an overview of French technological know-how in cutting edge sectors such as Sustainable Development, Green energy, Sea Sciences and Technologies, Microtechnology, Biomedical engineering, Transport and Energy.

**French ⊕ Sciences:**

- > Prepares for a longer study project ;
- > Develop new competencies for relations with scientists and engineers ;
- > Gives benchmarks for careers in scientific cutting-edge fields.

**French ⊕ Sciences:**

- > A research-based educational practice that encourages participants to experiment, share, discover, debate and support a reflection about Sciences and Technology ;
- > A unique opportunity to build up a strong network in these scientific fields.

**A complete academic and logistical package:**

- > Airport pickup\*, transportation to and from the language center ;
- > Housing (three options), tutoring and monitoring of progress ;
- > Medical insurance link provided by Campus France ;
- > Assessment and final report.

*\* 10 students minimum required*

**3 WEEKS  
AT  
ACCENT  
FRANÇAIS  
MONTPELLIER**



# FOCUS ON SUSTAINABLE DEVELOPMENT

With its long and proud tradition of science and higher learning, Montpellier is internationally renowned for research in the fields of health, agronomy, and the environment. In 2019, the university strengthens its position as world leader in ecology in the Shanghai rankings. It is also the birthplace of modern medicine.

**Today, Montpellier is France's leader in research** on new agricultural models and environmental management, among other areas. The cities universities and research facilities offer numerous grants and scholarships to international students at the master's, doctoral, and postdoctoral levels.

By bringing together in a single program **innovators, entrepreneurs, scientists, educators, and researchers**, Accent Français and Campus France are leveraging this scientific dynamic to give international stu-

dents—France's future informal ambassadors—an appreciation of French technological know-how.

This three weeks program on environmental themes enables participants to:

- > Engage in group discussions of problems and issues confronting scientists and engineers;
- > Reflect individually on potential careers in cutting-edge companies and on the education and training programs most likely to jump start those careers.



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.....  
**An important part of the program consists of site visits innovative enterprises active within a scientific and economic community that shares dreams, aspirations, and motivations:**  
 .....

- > To meet the important challenges of the 21st century in ways consistent with the objectives of sustainable development and the Paris agreement on climate change ;
- > To promote innovative agricultural methods and practices that deploy research, education, and training to ensure food security and environmental quality for a global population projected to number 9 billion people by 2050, to manage our natural resources in a sustainable way, to cure chronic and emerging diseases, and to make the transition to societies that are respectful of the environment.



**COURSE CONTENT**

30 HOURS PER WEEK

■ **French as a foreign language: 15 hours per week**

- Acquisition and reinforcement of linguistic, communicational, and intercultural foundations ;
- acquisition and reinforcement of grammar and syntax ;
- practice in written and oral communication.

■ **Science and technology module: 15 hours per week**

- A Campus France exclusive + thematic visits.

■ **Thematic conferences**

Students deepen their knowledge through presentations by experts from the corporate world (including heads of small and medium-sized firms).

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



Duration

**3 WEEKS**



Location

**MONTPELLIER**

**PERIOD:** January, June, October

French ⊕ Sciences & University housing

**€2,000**

French ⊕ Sciences & Host family

**€2,100**

French ⊕ Sciences & Private apartment

**€2,200**

# 3 WEEKS AT ACCENT FRANÇAIS MONTPELLIER



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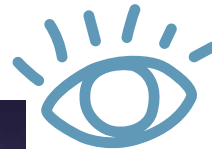


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## WEEK 1



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### MONDAY

- > Morning French course
- > Afternoon Montpellier tour

Montpellier is voted #1 city in France for its quality of life with 300 days of sunshine per year! This is the place to be to discover historical treasures of the Occitanie.

### TUESDAY

- > Morning French course
  - > Afternoon Visit
- Generation of electricity from renewable sources:** visit to a wind farm (Port la Nouvelle, Aude) or hydroelectric plant (near Vigan, Gard)



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### WEDNESDAY

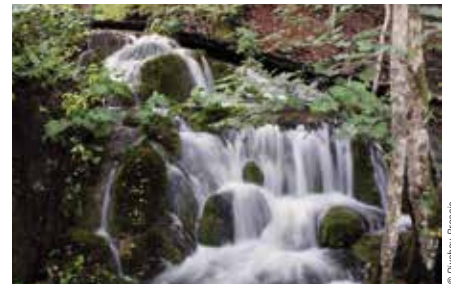
- > Morning French course
- > Afternoon Interactive conference and workshop: Renewable energy

Presenter: **Guillaume Marcenac, founder, Enercoop.** Mr. Marcenac is a specialized engineer and director of production for **Enercoop, a provider of electricity generated entirely from renewable sources.**

**Content:** Theoretical and scientific basics of energy; uses of energy; French electricity networks, markets, and providers; other energy networks; energy transition forecasts and scenarios.

### THURSDAY

- > Morning French course



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- > Afternoon Visit
- Ecological engineering:** visit to Biotope, where ecology is a key part of the environmental approach to land management (Méze)

### FRIDAY

- > Morning French course
- > Afternoon Drafting of the weekly logbook of the student, followed by a progress report with a teacher-tutor of the school.

### SATURDAY

- > All day Excursion to Saint-Guilhem le Désert and Lac du Salagou
- Visit of one of the most beautiful villages of France! Stroll through the narrow streets of the village and discovery of the abbey. Let yourself be amazed by the Salagou lake, known for its special red lands!



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# WEEK 2

## MONDAY

- > Morning French course
- > Afternoon Visit

**Climate change and ecosystems:** visit to ECOTRON experimental facility for the study of the effect of climate change on ecosystems with Jacques Roy, a CNRS research director.

## TUESDAY

- > Morning French course
- > Afternoon Conference: How do I actually affect the environment?



© Pixabay, Bernhard Stærck

Presenter: **Carole Sinfort, research professor at Montpellier SupAgro** and a specialist in pesticides and life-cycle analysis  
**Content:** Methods of environmental evaluation; the principle behind the ACV method; examples; discussion.

## WEDNESDAY

- > Morning French course
- > Afternoon Ideas Debate

The students, guided by their teacher-tutor, will develop their personal reflection and argue their point of view.



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## THURSDAY

- > Morning French course
- > Afternoon Visit  
Pesticide research



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Visit to a pesticide research center in Agropolis with **Carole Sinfort, research professor at Montpellier SupAgro** and a specialist in pesticides and life-cycle analysis. [www.irstea.fr/linnovation/equipements-et-plateformes/plateau-reducpol-montpellier](http://www.irstea.fr/linnovation/equipements-et-plateformes/plateau-reducpol-montpellier)

## FRIDAY

- > Morning French course
- > Afternoon Drafting of the weekly logbook of the student, followed by a progress report with a teacher-tutor of the school.

## SATURDAY

- > All day Excursion to Arles et Saintes Maries de la Mer

Discovery of this beautiful city listed as UNESCO World Heritage! You will appreciate the old streets and architectures of this city of Ancient Rome. Discover the village of Saintes Maries de la Mer and its legendary church, built between sky and sea and the territory of the Camargue.



© Pixabay, Hens



# WEEK 3

## MONDAY

- > Morning French course
- > Afternoon Biodiversity: visit to Villeneuve saltmarsh. [www.cenlr.org/gerer/sites/salines](http://www.cenlr.org/gerer/sites/salines)



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## TUESDAY

- > Morning French course
- > Afternoon Conference - Water, the new ecological challenge:

combatting pollution and protecting aquatic environments

Presenter: **Jean-Luc Rivière, coordinator of community relations, Agence de l'Eau Rhône Méditerranée Corse**

**Content:** Adaptation to climate change; the "de-waterproofing" of soils; conserving water; preserving wetlands etc. Introduction to professional competencies in water and energy; critical analysis of policies in these areas and prospects for the future.

## WEDNESDAY

- > Morning French course
- > Afternoon Conference  
At the crossroads of nature and advanced technology

Presenter: **Emmanuel Petiot, managing director, DEINOVE, Grabels**

**Content:** Reconciling biology and technology in health (new antibiotics) and food(replacing petrosourced with biosourced substances, natural colorants, nutritional supplements, etc.)

## THURSDAY

- > Morning French course
- > Afternoon Visit  
Waste recycling:

Visit to the MAERA purification plant in Lattes or the AMETYST methanation site in Baillargues



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## FRIDAY

- > Morning French course
- > Afternoon

Finalization of the weekly logbook of the student. End-of-course report with a teacher-tutor from the school.

## SATURDAY

- > Home-coming

**3 WEEKS  
AT  
CIEL  
BRETAGNE  
BREST**



**BRETAGNE** 

# SCIENCE & TECHNOLOGY OF THE SEA

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Ciel Bretagne, in association with Campus France, Technopôle Brest Iroise, and *Campus Mondial de la Mer*, offers English-speaking students with beginner-level French a 3-week program of visits to companies and state-of-the-art laboratories (conducted in English), conferences on current and future challenges facing the engineering professions, and courses in French as a foreign language. The program also includes a wide selection of excursions and cultural visits centered on the theme of “Science and technology of the sea”.

Ciel Bretagne is affiliated with the Bretagne Ouest chamber of commerce and industry and has been teaching **French as a foreign language** for 30 years. Each year it welcomes between 700 and 1,000 students from all over the world.

International groups enable all participants to increase their knowledge of French, while excursions allow them to discover the natural and cultural heritage of beautiful Brittany.

**Research efforts in science,**

**information, and digital technology** are particularly intense in and around Brest, which, combined with Brittany’s maritime heritage and focus, makes the theme of marine science and technology an obvious choice. The Brest area is **Europe’s leading marine research center** in terms of the number of people, institutions, and companies involved in marine science and technology. The concentration of activity makes Brest one of the world’s leading marine re-

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search areas. Brest has invested massively in the development of marine resources, for example, through an investment of more than €200 million to attract and support companies active in the field of sea-based renewable energies.

The city's university campus is also focused on the sea, with the European Institute for Marine Studies, a maritime law track in the law school, and ocean-oriented schools of engineering.

Other important actors in the sector—such as Ifremer, the Ecole Navale, Shom, and Cedre—also operate in and around Brest.

It is in this context that Ciel Bretagne has developed a program that enables students to improve their French while exploring one of the **most beautiful regions of France** and advancing their knowledge of one of the most promising fields for the future of our planet.



GET 6 ECTS CREDITS WITH THIS PROGRAM



**COURSE CONTENT**

30 HOURS PER WEEK

■ French-language instruction and thematic activities cover 30 hours a week over 3 or 4 weeks:

- > 15 hours of instruction each week in French as a foreign language, enabling students to acquire or improve their oral and written communication skills ;
- > A program of visits to companies and institutes specialized in the field of marine resources ;
- > A program of cultural visits to discover the attractions of the Brittany region.

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



Duration  
**3 WEEKS**



Location  
**BREST**

PERIOD: January and July

**3 WEEKS**

French ⊕ Sciences & University housing

**€1,655**

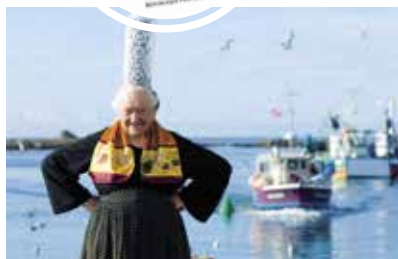
French ⊕ Sciences & Host family

**€1,945**

French ⊕ Sciences & Private apartment

**€2,395**

# 3 WEEKS AT CIEL BRETAGNE BREST



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## WEEK 1

### MONDAY

- > **Morning** French language study
- > **Afternoon** Visit to Brest: the history of the city viewed through its maritime past

Brest has always been marked by its proximity to the sea, and that remains true today. Students discover the multiple facets of the city: its ports; the Rade, a sheltered bay of 180 km<sup>2</sup> that provides ideal conditions for water sports all year; its castle; and the famous Rue de Siam.

**Welcome reception at Brest city hall.**



© Pixabay, B. Heschung



### THURSDAY

- > **Morning** French language study
  - > **Afternoon** Visit to the University
- In the course of a visit to **the Université de Bretagne Occidentale** students will have an opportunity to meet science students and discuss their projects.

### FRIDAY

- > **Morning** French language study
- > **Afternoon free**

### SATURDAY

- > **Morning free**
  - > **Afternoon A Brittany Tour**
- Excursion to **Quimper**, capital of the Cornouaille region and a town of historical and artistic interest. The group will walk through the town's narrow streets, with their distinctive half-timbered houses, stopping to visit the cathedral and the museum of Breton culture.

Leaving Quimper, the group will stop in **Concarneau** to visit a fish cannery and explore the ramparts and tower of the old town.



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### TUESDAY

- > **Morning** French language study
- > **Afternoon** Visit to Technopôle Brest Iroise

A presentation on the region's vibrant maritime culture provides a good view of scientific activity in and around Brest, where 60% of French research linked to the sea is conducted. Brest is home to the highest concentrations of research and development in Europe in fields such as marine safety and security, development of sea-based renewable energy, and exploitation of marine biological resources.

### WEDNESDAY

- > **Morning** French language study
- > **Afternoon** Energy from the sea

The scarcity and rising cost of resources has focused attention on the diversification of global energy production. This was the challenge that Sabella accepted in 2008 when the company deployed Sabella D03, the first French marine turbine. The experimental marine turbine, 3 meters in diameter, was successfully tested for a year in Brittany off the island of Ouessant. DCNS, another firm involved in marine turbine projects, is planning to deploy seven turbines in the Raz Blanchard, in Normandy, in 2018.



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# WEEK 2

**MONDAY**

- > **Morning French language study**
- > **Afternoon Shellfish aquaculture: visit to the hatchery of Tinduff**

The hatchery was created in 1983, after fishermen realized that the sea's natural resources were not infinite. The hatchery reseeds the Rade of Brest and works closely with other fisheries. From Granville to La Rochelle, the fisheries buy spat to reseed their beds. The hatchery is currently working on another species: the scallop *Chlamys varia*, in response to the need to diversify the fishery.



**TUESDAY**

- > **Morning French language study**
- > **Afternoon Visit to an engineering school**

Overview of engineering education in France; encounters with students.



**WEDNESDAY**

- > **Morning French language study**
- > **Afternoon Cedre is a nonprofit set up after the spill from the tanker Amoco Cadiz**

Its goal is to improve France's capacity to respond to pollution from accidents.

**Cedre** is responsible for the documentation, research, and experimentation on pollutants, their effects, and how to deal with them.

**THURSDAY**

- > **Morning French language study**
- > **Afternoon Visit to Océanopolis:**

an aquarium with European dimensions and a recreational center focused on the oceans. With three pavilions—tropical, polar, and temperate (around Brittany)—there is a vast amount to see! The otter trail is exceptional.



**FRIDAY**

- > **Morning French language study**
- > **Afternoon free**

**SATURDAY**

- > **Morning free**
- > **Afternoon "The Wonder of the West," Mont Saint Michel stands in the middle of a vast bay surrounded by Europe's most extreme tides.**



# WEEK 3

**MONDAY**

- > **Morning French language study**
- > **Afternoon TechNature Laboratories:** founded in 1986 by Christine Bodeau, a biochemist fascinated with algae, is today France's leader in the design of marine health care products for spas and thalassotherapy centers.



**TUESDAY**

- > **Morning French language study**
- > **Afternoon Workshop/role play** on the interaction between nature and human societies in coastal zones.

**WEDNESDAY**

- > **Morning French language study**
- > **Afternoon The Roscoff laboratory**



is a research and teaching institute for marine biology and oceanography.

Research areas include the cell cycle of the sea urchin; the biochemistry and development of brown and red algae; the ecophysiology of hydrothermal fauna and their adaptation to extreme environments; the diversity of phytoplankton and zooplankton; evolution and population genetics; and benthic ecology. Research is being conducted on chemical tracers to understand the circulation of masses of ocean water.

**THURSDAY**

- > **Morning French language study**
- > **Afternoon Meeting with a chef:** the art of algae in Breton cooking.



**FRIDAY**

- > **Morning French language study**
- > **Afternoon free**

**SATURDAY**

- > **Departure**



**3 OR 4 WEEKS**  
AT  
CLA  
UNIVERSITÉ DE  
FRANCHE-COMTÉ  
**BESANÇON**



# MICROTECHNOLOGY AND BIOMEDICAL ENGINEERING

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The Center for Applied Linguistics (CLA, Centre de linguistique appliquée) at the Université de Franche-Comté, in association with Campus France, offers a program of language, cultural, and scientific immersion on the topic of microtechnology and biomedical engineering in partnership with ISIFC, a school of biomedical engineering; the university's faculties of medical and pharmaceutical sciences and of natural and technical sciences; U-SPORTS; and the Innov'Health and PMT microtechnology clusters.

**UNIVERSITÉ**   
**FRANCHE-COMTÉ**



CENTRE DE LINGUISTIQUE APPLIQUÉE  
UNIVERSITÉ DE FRANCHE-COMTÉ

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Designed for English-speaking students, the program includes guided tours of state-of-the-art companies and laboratories, lectures in English on current and upcoming issues in the engineering professions, classes in French as a foreign language (FLE), and a wide range of excursions and discovery activities.

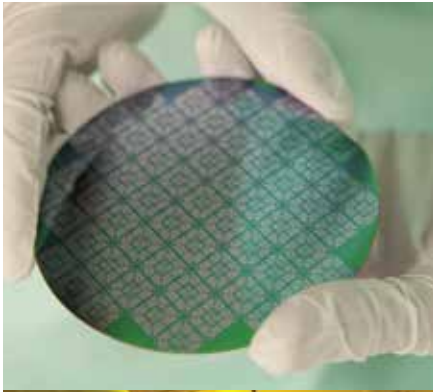
.....  
**CLA – Center for Applied Linguistics, internationally recognized**  
.....

CLA, founded in 1958, was one of

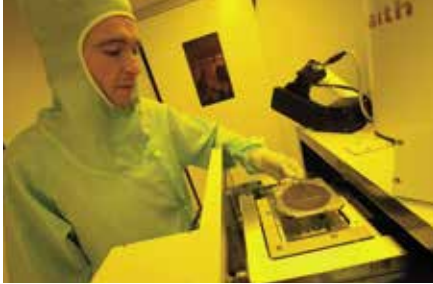
the first university language centers to develop a program of practical foreign language training based on linguistics research applied to education and on active learning methods: language labs, a focus on communication skills, self-teaching, and learning through immersion. About 4,000 students come to CLA each year from all over the world.

CLA is a member of CampusFLE, a group of university-based French-language centers devoted to promoting French as a language of study in academic training programs.





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### Le Grand Besançon (Greater Besançon), a member of the FRENCH TECH network

Affiliated with the **microtechnology competitiveness cluster**, Greater Besançon is an industrial ecosystem based on the region's historical strengths in the field of microtechnology – a large part of them in the health sciences. For a decade, some 300 local companies have been active in the field, most of them enjoying international recognition and support from well-known training and research centers such as EFS (the French blood organization), ISIFC, Femto-ST, LERMPS, Utinam, and the Centre d'Investigations Cliniques.

In 2016, Greater Besançon and the microtechnology competitiveness cluster joined the **Health Tech France network (a component of the prestigious French Tech organization)** demonstrating the innovative and creative capacity of region's start-ups in the field of the medicine of the future.



GET 6 TO 8 ECTS CREDITS WITH THIS PROGRAM



### COURSE CONTENT

30 HOURS PER WEEK

- **French as a foreign language – 15 hours per week**
  - > Acquisition of oral and written communication skills ;
  - > Development of intercultural competence.
- **Microtechnology and biomedical engineering – 15 hours per week**
  - > Introduction to the faculty and facilities of the Université de Franche-Comté in the field of microtechnology and biomedical engineering ;
  - > Participation in conferences and scientific debates ;
  - > Visits to state-of-the-art companies combining microtechnology and biomedical applications ;
  - > Cultural tours.
- **Student performance will depend on 3 points:**
  - > Quality of the student's weekly journal and subsequent progress report ;
  - > Degree of participation in program activities ;
  - > Progress in French as a foreign language.

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



Duration

**3 or 4 WEEKS**



Location

**BESANÇON**

PERIOD: January-February

#### 3 WEEKS

French ⊕ Sciences & University housing

**€2,000**

French ⊕ Sciences & Host family

**€2,300**

French ⊕ Sciences & Private apartment

**€2,700**

#### 4 WEEKS

French ⊕ Sciences & University housing

**€2,400**

French ⊕ Sciences & Host family

**€2,800**

French ⊕ Sciences & Private apartment

**€3,400**

3 weeks program: 6 ECTS credits - 4 weeks program: 8 ECTS credits

## MONDAY

- > **Morning** French language study
- > **Afternoon** Tour of Besançon

a city of art and history with a proud heritage, a green city with an exceptional natural environment, a student-friendly city where one in five inhabitants is a student, and a business-friendly city ranked 1<sup>st</sup> in its category.



© Ville de Besançon

## TUESDAY

- > **Morning** French language study
- > **Afternoon** Visit to the Université de Franche-Comté

**Introduction to the science and technology programs offered** in the university proper and its affiliated engineering schools; visits to research facilities.



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## WEDNESDAY

- > **Morning** French language study
- > **Afternoon** Presentation on the programs of the ISIFC, the Franche-Comté Institute of Engineering

ISIFC trains aspiring biomedical engineers specializing in biomechanics and microsystems, bioengineering, and e-health.

**Presentation on Biotika, a company** founded within ISIFC in 2006 and integrated into the ISIFC curriculum to enable students to discover all aspects of a biomedical engineer's job and life in an engineering consultancy firm.

## THURSDAY

- > **Morning** French language study
  - > **Afternoon** Thematic Conference
- The biomedical engineer: What sort of work in what kinds of jobs in France and abroad?**

Telemedicine, clinical research, medical imaging... A comprehensive look at job prospects in the medical sector with opportunities to meet with research faculty, students, and medical professionals.



© UFC, L. Godeard

# WEEK 1

## FRIDAY

- > **Morning** French language study
- > **Afternoon** Students prepare their weekly report and meet with a CLA instructor to review and assess progress.

## SUNDAY

- > **Excursion –**
  - Discovery of the Haut-Doubs area**
- Guided tour of the Château de Joux, lunch at a typical Franche-Comté inn, boat trip on the Doubs river, and discovery of the Saut-du-Doubs waterfall near the Swiss border.



© Région BFC, D. Ceshron



## WEDNESDAY

- > **Morning** French language study
- > **Afternoon** Presentation on the Innov'Health

competitiveness cluster led by industry representatives. The cluster's activities encompass product development and high tech processes related to the medicine of the future: Medical devices and implants; innovative therapies and personalized medicine; e-health and the Internet of Things; the European Silver Economy; well-being and nutrition.

## THURSDAY

- > **Morning** French language study
- > **Afternoon** Visit to STATICE SANTÉ company.

Stalice Santé designs and manufactures surgical instruments; silicone implants and other biomaterials; and implants carrying active ingredients, sensors, and micro-dosing functions.

## FRIDAY

- > **Morning** French language study
- > **Afternoon** Students prepare their weekly report and meet with a CLA instructor to review and assess progress.

## SATURDAY

- > **Excursion –**
- Discovery of the Burgundy region**

Guided tour of the city of Dijon, the regional capital, with its outstanding architectural heritage. Guided tour of the Hospices de Beaune / Hôtel Dieu de Beaune, founded in 1443.



© Région BFC, A. Dore

# WEEK 2

## MONDAY

- > **Morning** French language study
  - > **Afternoon** Thematic Conference
- Engineering and biocompatible prostheses.**

Cochlear implants, lens implants, neuroprostheses. Speaker: Member of ISIFC faculty.



© UFC, L. Godeard

## TUESDAY

- > **Morning** French language study
- > **Afternoon** From basic research to industrial partnership: visit to FEMTO-ST, France's largest engineering research lab.

FEMTO-ST unites engineering and information and communication sciences and technologies. Its research activities often have a socioeconomic impact in sectors such as energy and transportation, health, telecommunications, space sciences, instrumentation and metrology, watch-making, and luxury goods.

# WEEK 3

## MONDAY

> **Morning French language study**  
 > **Afternoon Thematic Conference**  
**Mechanics, electronics, automatic systems – smart structures and systems.** Speaker: Member of the Faculty of Natural and Technical Sciences, Université de Franche-Comté.

## TUESDAY

> **Morning French language study**  
 > **Afternoon Discovery of IFR, the research institute for cellular and tissue biology and engineering**  
 IFR brings together research units working in biology and health at the Université de Franche-Comté, at the university hospital center, and at the Bourgogne-Franche-Comté office of EFS, the French blood agency.

## WEDNESDAY

> **Morning French language study**  
 > **Afternoon DIXI Medical** designs, develops, manufactures, and markets medical devices all over the world for use in functional neurosurgery and other purposes. DIXI Medical is a member of the microtechnology competitiveness cluster and of the Innov'Health cluster.

## THURSDAY

> **Morning French language study**  
 > **Afternoon Scientific debate: Medicine of the future: virtual or digital, will it remain human?**  
 Students, guided by a PhD candidate and their CLA instructors, will reflect on the debate and present their own views.

## FRIDAY

> **Morning French language study**  
 > **Afternoon Students prepare their weekly report** and meet with a CLA instructor to review and assess progress.



## SATURDAY

> **Excursion to Strasbourg**  
**European capital, headquarters of the European Parliament.** Guided tour of the city-center (a UNESCO World Heritage site).



© Privacity

# WEEK 4

## OPTIONAL

## MONDAY

> **Morning French language study**  
 > **Afternoon Career path of a French Tech startup and tour of OneFit Medical, founded in 2011**  
 Onefit Medical's project focuses on the topic of patient-specific orthopedic surgery using products that can be adapted to any joint.

## TUESDAY

> **Morning French language study**  
 > **Afternoon Interactive presentation: Athletic performance and scientific measurement.** The presentation will outline how sports psychology, exercise physiology, and the bio-mechanical analysis of movement come together to break athletic records. Speaker: Member of the U-SPORTS faculty at UFC



© UFC, L. Godard

## WEDNESDAY

> **Morning French language study**  
 > **Afternoon Research and innovation: the EPSI platform.**  
 The EPSI platform (exercise, performance, health, innovation) is a space where academic, hospital, and private-sector partners can meet to conceive and refine research projects that require specific facilities, physiological research equipment, and staff trained in research methods and practices.



© UFC, L. Godard



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## THURSDAY

> **Morning French language study**  
 > **Afternoon Scientific debate: Are there any limits to athletic performance?**  
 With the participation of U-SPORTS faculty and students. CLA students, guided by a PhD candidate and their instructors, will reflect on the debate and present their own views.

## FRIDAY

> **Morning French language study**  
 > **Afternoon Completion of students' weekly log** Final meeting with CLA instructor to review and assess student progress.  
**Farewell party.**

**SATURDAY** > **Departure**

**3 WEEKS  
AT  
FRENCH IN  
NORMANDY  
ESIGELEC**

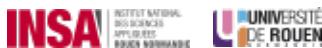


# FOCUS ON TRANSPORT AND ENERGY

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**



# 3 WEEKS AT FRENCH IN NORMANDY ESIGELEC



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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



© PIXABAY

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.



© ESIGELEC

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



© ESIGELEC

- > **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.



© PIXABAY

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.



© PIXABAY

#### 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



© UNIVERSITY OF ROUEN NORMANDIE



#### WEDNESDAY, JUNE 17

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

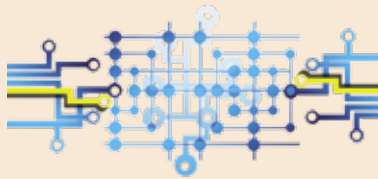
**Session 4:** Development of the program in C language to be implemented in the robot.

#### 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 Vehicles, etc ...

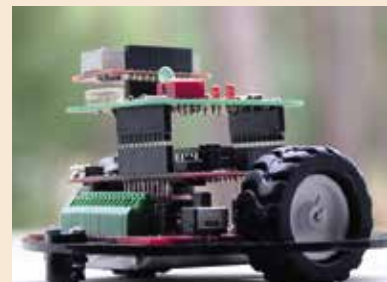


© PIXABAY

#### 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.



© ESIGELEC

#### 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, ...



© CESI

#### 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**



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