FRENCH SCIENCES PROGRAMS

A RESEARCH-BASED APPROACH

CAMPUS FRANCE

campusfrance.org
THE FRENCH SCIENCES PROGRAMS

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.

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.

3-4 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.

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 three of the most beautiful regions of France

* 10 students minimum required

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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.

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 provided by Campus France ;
> Assessment and final report.

* 10 students minimum required
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.

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 students—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.
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.*

### ACCENT FRANÇAIS MONTPELLIER

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<th>Duration</th>
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<td>3 WEEKS</td>
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<th><strong>PERIOD:</strong> March, July, September, October</th>
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<td>French Sciences &amp; University housing</td>
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3 WEEKS AT ACCENT FRANÇAIS MONTPELLIER

WEEK 1

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)

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

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!
**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?
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.

**THURSDAY**
> Morning French course
> Afternoon Visit
Pesticide research
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/innovation/equipements-et-plateformes/plateau-reducpol-montpellier](http://www.irstea.fr/innovation/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.

**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)

**TUESDAY**
> Morning French course
> Afternoon Conference - Water, the new ecological challenge: combating 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.

**THURSDAY**
> Morning French course
> Afternoon Visit
Waste recycling: Visit to the MAERA purification plant in Lattes or the AMETYST methanation site in Baillargues

**FRIDAY**
> 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.)

**SATURDAY**
> Home-coming
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- or 4-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-
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.
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 km² that provides ideal conditions for water sports all year; its castle; and the famous Rue de Siam. Welcome reception at Brest city hall.

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.

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.

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.

FRIDAY
> Morning French language study
> Afternoon free

SATURDAY
> Morning free
> Afternoon Tour of the superb Abers coast:

also known as the coast of legends. Here the sea meets a wild coast line, and the tides mingle with outcroppings of greenery. Majestic lighthouses mark the entrance to these havens of peace, which are accessible to hikers and boaters.

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.
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
> 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 4

OPTIONAL

MONDAY
> Morning French language study
> Afternoon Tour of the commercial port
Exploration of the port and its activities: the container terminal, the offshore wind industry, and cruise ships.

TUESDAY
> Morning French language study
> Afternoon Excursion to Le Conquet: the westernmost point in France!
Visit to the Cross Corsen: which controls maritime traffic in the Ouessant channel and coordinates sea rescue activities.

WEDNESDAY
> Morning French language study
> Afternoon Visit to CLS:
and introduction to its 6 strategic activities: management of sustainable fisheries, maritime security, fleet management, alternative energy and mining, and ground and space systems. The firm provides satellite services based on localization and collection of environmental data, observation of oceans and continental waters, and land and maritime surveillance.

THURSDAY
> Morning French language study
> Afternoon Brittany is the center of France’s fishing industry:
Students visit a fish farm and are introduced to Brittany’s rich marine resources.

FRIDAY
> Morning French language study
> Afternoon Review of the 4-week stay and free afternoon.

SATURDAY
> Departure
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.

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.
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.

CLA - UNIVERSITÉ DE FRANCHE-COMTÉ

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.

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.

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CLA - UNIVERSITÉ DE FRANCHE-COMTÉ

BESANÇON

€2,400

French Sciences & University housing

€2,800

French Sciences & Host family

€3,400

French Sciences & Private apartment

3 weeks program: 6 ECTS credits - 4 weeks program: 8 ECTS credits
WEEK 1

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 1st in its category.

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.

WEDNESDAY
> Morning | French language study
> Afternoon | Presentation on 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

Engineering and biocompatible prostheses.
Cochlear implants, lens implants, neuroprostheses. Speaker: Member of ISIFC faculty.

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

WEEK 2

MONDAY
> Morning | French language study
> Afternoon | Thematic Conference

Engineering and biocompatible prostheses.
Cochlear implants, lens implants, neuroprostheses. Speaker: Member of ISIFC faculty.

WEDNESDAY
> Morning | French language study
> Afternoon | Presentation on the InnovHealth 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.

Statice 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.

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.
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 InnovHealth 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

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 biomechanical analysis of movement come together to break athletic records. Speaker: Member of the U-SPORTS faculty at UFC

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.

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