

2018 Student Guide



**AVIATION
SUMMER PROGRAM**

FRANCE

Congratulations!

You have been admitted to the GEA Aviation Summer Program 2018! You will soon be on your way to France and we hope this experience will be memorable. This guide will answer many of your questions and will help you make your stay as easy as possible. Use it as a survival guide and bring it with you.

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Summer Program Website: <https://asp.ensma.fr/>

Important information

The cost of the program includes:

- Pedagogic and administrative costs
- Industrial and touristic visits
- Room and board (breakfast & lunch during weekdays only)

The cost of the program does not include:

- The round trip from the United-States to France is at your expenses. You are advised to book your flight tickets in advance in order to get good prices. If you want to travel around Europe before or after the summer program, flights from London, Amsterdam and Hamburg are sometimes less expensive.
- Dinners and meals during weekends. In addition, housing will only be provided by the school from May 29th, therefore, if you plan to arrive before this date, you will need to book accommodation by yourself and it will be at your expenses.

Contacts & dates

Please keep these addresses and contacts; they will be very useful during your stay (maps are available at the end of this booklet).

ENAC

7 avenue Edouard Belin
BP 54005
31055 Toulouse
<http://www.enac.fr/>



Contact: Ms Véronique Zavan & Marc Chouffot +33 (0)5 62 17 44 34 study_abroad@enac.fr

ISAE-SUPAERO

10 avenue Edouard Belin
BP 4032
31055 Toulouse Cedex 4
Tel: + 33 (0)5 61 33 80 80
www.isae-supaero.fr



Contact : Ms Mélanie Frayssinet melanie.frayssinet@isae.fr +33 (0)5 61 33 80 32
Ms Maud Samson maud.samson@isae.fr +33 (0)5 61 33 84 07

ISAE-ENSMA

Téléport 2
1 avenue Clément Ader
86961 Futuroscope Chasseneuil Cedex
Tel: 05 49 49 80 80
www.isae-ensma.fr



Contact : Ms Aurélie Cotillon aurelie.cotillon@ensma.fr +33 (0)5 49 49 80 16
Ms Maggy Sourisseau maggy.sourisseau@ensma.fr + 33 (0)5 49 49 83 46

Dates

June 1st – June 15th = ENAC & ISAE-SUPAERO (Toulouse)
June 16th – June 19th = Montpellier & Marseille
June 20th – June 23rd = ENAC & ISAE-SUPAERO (Toulouse)
June 24th – June 29th = ISAE-ENSMA (Poitiers)
June 30th – July 2nd = Bordeaux & Arcachon
July 3rd – July 13th = ENAC & ISAE-SUPAERO (Toulouse)

As you may already know, July 14th is Bastille Day in France and you will have the opportunity to enjoy fireworks and parties. Public administrative places (ie: Post-office) and shops are closed on that day.

A group leader will accompany you during the whole program in order to give support in your daily life (accommodation, transports etc.). His/her contact details will be given to students before arrival. The group leader can be contacted by students especially if they encounter difficulties of any kind during their stay in France. Also, he/she will be the link between students and their families if needed. Don't hesitate to give his/her number to your relatives (for instance if they have difficulties to reach you in case of emergency)

Your arrival in Toulouse

HOW TO GET TO TOULOUSE?

Toulouse – Blagnac Airport: <http://www.toulouse.aeroport.fr/en>

Toulouse Train Station: <https://www.gares-sncf.com/fr/gare/frxyt/toulouse-matabiau>

“Gare de Toulouse Matabiau” is Toulouse’s main train station, where all long distance trains arrive and depart. You can buy tickets via <http://www.raileurope.com/>

It usually takes 6 to 7 hours to go to Toulouse from Paris by train. Please note that there is a SNCF train station in Charles de Gaulle Airport in Paris. It might be more convenient to take a train from there instead of taking one in a train-station located in the center of Paris. Remember that you will have luggage to carry...

HOW TO GET TO ENAC?

Free ENAC Shuttle (From Toulouse – Blagnac Airport)

A free shuttle runs on weekdays between ENAC and Toulouse-Blagnac Airport. You will find it at the D Terminal/Hall (Arrivals, Hall B, level 0, gate 2, shuttle location). The bus is large and white with ISAE and ENAC logos. This shuttle is free with a student ID. If you have not received your student ID yet, you can show the acceptance letter you received (don't forget to bring it with you).



➤ Shuttle schedule:

<i>Timetable</i>	<i>Point of Departure</i>	<i>Point of Arrival</i>
8.20 a.m.	Airport	ENAC
6.15 p.m.	ENAC (Building A)	Airport

With Airport Shuttle + Metro B + Bus 78 or 37

- Take the Airport Shuttle (“navette”) in front of the airport to get to the city center (Runs every 20 min from 7am to midnight every day)
- Buy ticket at the shuttle station on the ground floor by Porte C
- Get off at the stop “**Compans Caffarelli**” and transfer to **Metro Line B**
<http://www.tisseo.fr/sites/default/files/NavetteAeroport.html>
- Buy ticket from vending machines or “Point de Vente” (ticket office)
- Take **Metro Line B**, direction “**Ramonville**”
- Get off at **Faculté de Pharmacie**
- Take a Bus **37** from “**Fac de Pharmacie**” in direction of “**Jolimont Toulouse**” or bus **78** in direction of “**St Orens Lycée**”
(every day till 9pm) <http://www.tisseo.fr/se-deplacer/horaires>
- Get off at “**ENAC**” bus stop

Taxi

The simplest way to get to campus is to take a taxi, but it is of course more expensive. From the airport, a taxi will cost 40€ minimum (we advise you to share the costs if possible); or from the train station, it will cost 20-25€; if you choose this option, make sure you have enough Euro cash on-hand.

Public Transportation

Information regarding airport shuttle, metro and bus schedules and route maps can be found at www.tisseo.fr and <http://www.toulouse.aeroport.fr/en> > “Access, Transport and Car park”. Tisseo is the Toulouse public transportation network (metro/bus), tickets cost 1€60 one-way (the ticket machines only accept coins). This ticket is valid for an entire trip (transfers, etc), so keep it until your arrival.

- A ticket for the airport shuttle costs 8€
- A one-way Tisseo ticket (bus/metro/tram) costs 1€60
- This ticket is valid for an entire trip (transfers, etc), so keep it until your arrival.
- Many students buy a Tisséo Pastel card if they are less than 26. The card costs 8€ (you need a passport photo). With this card, you can buy 10 trips for 4€ each, or a month of unlimited trips for 10 euros only.

You are advised to arrive in Toulouse no later than May 29th in order to have a rest before the program begins. ENAC Student Residence Hall will be available as early as May 29th and until Monday, July 16^h.

Upon arrival on the ENAC campus, you will have to show your passport to the Security Guard (Poste de Garde). They will show you to how to get to “Résidence Clément Ader”, where to do your check-in and how to get your welcome package. Ask the guard to call the Group Leader to announce your arrival.

Suggested Packing List

Travel light! It is much easier than struggling with too much luggage. Remember that you will be able to do laundry, therefore we advise you not to bring unnecessary clothes. You will have the opportunity to do some shopping once in France in case you need anything.

Summers in France can be hot and humid but also sometimes cool and rainy. Please note that air-conditioning in France is not as popular and as frequent as in North America. Be sure to bring different types of clothes. Also, don't forget to bring comfortable shoes as you will walk a lot (high heels can be tricky on cobble stones.)

- **Important things to put in your suitcase:**
 - Passport and identity documents (+ copies)
 - Proof of insurance (+ copies)
 - Credit card, ATM card, and/or traveler's checks
 - Extra passport-size photos (useful for metro cards, etc.)
 - Calculator, notebooks, pencils (for classes)
 - Laptop, charger, Ethernet cable (RJ 45) & power strip w/ plug adapter*
 - Camera, charger, USB cable, memory cards & plug adapter*
 - Beach towel
 - Swim suit, sunglasses, sunscreen
 - Sports equipment / clothing
 - Rain coat and/or umbrella
 - Comfortable walking shoes and dress shoes appropriate for technical site visits
 - Summer clothes, light jacket and a few warmer clothes
 - Business casual clothes for site visits (slacks, skirt, collared shirt, etc)
 - Small/medium-sized suitcase (for Paris and Biarritz trips)
 - French/English dictionary and a travel guide
 - This guidebook!

***DO NOT bring anything with a heating element** (hair dryer, curling iron, clothing iron, etc. cf "Electrical Equipment" in the Helpful Information section.)

Important information:

You will need **business casual clothes** during industrial visits: Nice jeans or slacks, polo/button-down shirts and blouses, closed-toed shoes. This means no shorts, no t-shirts, no torn jeans, no sandals, no high heels with open backs, etc...

You should not go to school in shorts and flip flop. Also, remember to remove your cap in class. Eating during class is considered as rude in France.

Helpful Information

Passports

It is imperative to have a valid passport to come to France. If you already have one, please check the expiration date to ensure that it will still be valid during your trip to France and six months after your return to the U.S. If you do not have a passport, have a look at <http://travel.state.gov/passport> .

Once you have your passport, make copies of it. Leave one copy at home and bring another with you in case your passport is lost or stolen (remember to keep the copy separately from your passport) or send a scanned copy of your passport to your email address in order to be able to access it anywhere.

Since the duration of the program is less than 3 months, US Citizens do not need to apply for a visa and will be considered as tourist. Citizens from other countries should check with the French Embassy or Consulate in their home country to check visa requirements.

We recommend that all students traveling abroad consult the US Department of State's website for information regarding safety notices: <http://www.state.gov/travel/>

Insurance

You must subscribe to an insurance (prior to your arrival) covering your medical expenses but also civil liability. An insurance covering repatriation on medical grounds is also highly recommended.

Banking

You can easily use ATMs to withdraw money, exchange money, or cash traveler's checks for Euros (the European currency) in Toulouse Blagnac airport.

IMPORTANT: Contact your bank(s) before you leave to inform them of your travel plans. Make sure you are fully aware of the maximum amount you can withdraw from a cashpoint/ATM and the fees you may have to pay. Keep the telephone number of your bank and all relevant documents that can be useful in case you lose your credit card for instance.

France's currency is Euro (EUR or €). Check google.com/finance for current exchange rates. We recommend that you use **ATMs to get cash**, and to use **credit/debit cards for big purchases**. There are ATMs located throughout France, and you can withdraw money directly from your account. You will pay fees each time you withdraw money (charged by your home bank and by the bank from which you are withdrawing). Some banks have agreements with overseas banks that avoid these fees (such as Bank of America & BNP in France: bankofamerica.com)

Credit cards are a convenient way to make purchases. The credit card automatically converts the charges into dollars on your statement and you have a written record of your purchases. Most charge a 3% fee on foreign currency transactions; make sure you understand how this works.

DO NOT use a credit card to withdraw cash at an ATM; this is usually very expensive!

Always use an ATM/Debit card for cash. If you're not sure, check with your bank!

Travelers' cheques are usually accepted only if you have a French bank account, which might not be the case as you will stay for a few weeks only. Some shops do not accept them either. Please double-check before leaving how and where you can use them.

Cell Phones

International roaming and calling rates for your US cell phone are usually very expensive. Furthermore, only phones designed for European GSM networks ("World Phones") will work. If your cell phone accepts an international SIM card AND if it has been UN-SIM-Locked, you can purchase a French SIM card (a "pay as you go" card) to use it in France. Contact your cell phone provider for specific

information. You have the possibility to buy a cheap and simple French cell phone while you are in France, however bear in mind that your program is only 6 weeks long.

How to ring in France and abroad?

Calling France from abroad:

French phone numbers have 10 digits and start with "0" (ex 05.12.34.56.78). When you are calling from abroad, the country code for France is 33 and you drop the first "0" (+33 05 12 34 56 78)

Calling USA/Canada from France:

00 followed by 1 + number

French cell phone numbers all start with "06" or "07", and have 10 digits just like landlines. However, it is always more expensive to call a French cell phone.

Student ID Card

You will be given an ENAC - Université de Toulouse student ID card for the summer. You can also get an International Student ID Card (ISIC). You can get discounts in theaters, concert halls, shops and museums thanks to these cards. To obtain an ISIC or information about it, check out the following site: <http://www.isic.org/>. Some schools sell ISIC in their Travel Center or Study Abroad Office.

Carte 12-25 Rail Discount Card and Eurail

If you plan to take several trips by train while in France, you may want to buy the 12-25 card at the train station before you buy your first ticket. This card, which costs about 50€ and requires an ID photo, guarantees at least a 25% discount on train travel within France and may entitle you to a 50-60% discount on certain trains. For more information, visit <http://www.sncf.com/fr/tarifs-reduits/carte-jeune> (French only).

A Eurail pass may be more appropriate if you plan to travel outside of France as well. Eurail pass allows unlimited travel in several countries for a certain number of days (either consecutive or over a 2-month period). There are many peculiarities about using a Eurail Pass (nominal reservation fees and restrictions), but it is generally a cheap way to travel long distances in several countries. See www.eurail.com.

Car Rental

In order to rent a car in Europe, you must be at least 21 and you should have obtained your driving license for more than 1 year. You will be asked for an international credit card (Visa, for example) when you pick up the car. Though you normally do not need an international driver's license, it may be better for you to have one (for police controls). A car rented in France can be used in any western European country without additional requirements (it might be necessary to subscribe another insurance) Please note that if you are under 25, you will have to pay an additional daily fee of 25€. Lastly, automatic cars are not very common in Europe and it is more expensive to rent such cars. Here are some car rental agencies: Hertz (www.hertz.fr) and Europcar (www.europcar.com), Avis (<http://www.avis.fr/>).

Drivers must not drink and drive. If you have more than 0,5 g of alcohol in your blood when driving, you face serious penalties.

Electrical Equipment

http://en.wikipedia.org/wiki/Electrical_outlet#Type_E

France's wall outlets use 220V AC power (as opposed to 110V in the US), Type E plugs for grounded and Type C "Europlug" for non-grounded connections. Most electronics with an AC adapter (cell phone, laptop, camera, razors) are Dual-Voltage Compatible (INPUT:110~240VAC). Check the label on the adapter.





If the device is Dual-Voltage Compatible, only a plug *adapter* is needed. Since grounded (“3-prong”) plugs vary across Europe, it is best to get a two-prong non-grounded “Europlug” adapter. These usually work with any plug (even 3-prong US) in any outlet in Europe (except the UK). They also tend to be cheaper than the more complicated, less versatile adapters.

Otherwise, you will need a voltage *converter* to change 220V to 110V AC (otherwise the device will fry when you plug it in). Available at Radio Shack and most travel stores for ~\$20, they tend to be heavy, cumbersome, unreliable, and increase the risk of short circuits / electrical fires.



The residence hall rooms have multiple outlets, however they are depressed within the wall. You will need an adapter that juts out slightly in order to plug your electronics in (i.e. not an adapter that plugs in and is flush with the surface of the wall). You can bring a US power strip (NOT a surge suppressor) or extension cord with several plugs to run multiple items off of one plug adapter/outlet. However, be careful not to overload the outlet! Also, US surge suppressors will trip the circuit breaker in France because of the voltage difference.

IMPORTANT: Do not bring anything with a heating element- Hair Dryer, Curling Iron, Clothing Iron, etc... Even with the appropriate voltage converter, these items tend to catch fire while in use. “Travel” irons and hair dryers usually do not work well; it is cheaper, easier and safer to buy what you need when you get to France.

Safety and security

It is not recommended to carry too much cash when you travel, be careful with pickpockets in public areas, especially in the “metro”. Do not leave your belongings unattended. When you go out (at night), make sure you can be accompanied by friend and try to avoid unsafe areas.

You may find yourself in situations you are not used to. Consumption of alcohol is frequent during parties and can have serious consequence on your health. Also, be aware that the use of drugs is prohibited in France. It is also forbidden to smoke tobacco in public areas (such as bars & restaurants).

These are emergency numbers (free calls):

Police : 17

Emergency service (ambulance): 15

European emergency number: 112

Fire brigade: 18

If you are victim of a theft or attack, go to the nearest police station to make a complaint.

Don't hesitate to inform the group leader and/or members of the international office of the schools, they will help you if needed. They can also give you precious advice about French culture, dos and don'ts.

Survival French

Bonjour- *Hello*

Au revoir – *Bye*

Merci- *Thanks*

Oui/non – *Yes/no*

S'il vous plaît – *Please*

Excusez-moi / pardon / désolé(e)– *Sorry*

Je ne comprends pas – *I don't understand*

Pouvez-vous m'aider? – *Could you help me ?*

Je voudrais – *I would like*

Est-ce que vous avez...? *Do you have ... ?*

Sortie – *Exit*

Entrée – *Entrance*

Pousser – *Push*

Tirer - *Pull*

Cher – *expensive*

Pas cher/bon marché - *cheap*

Dos and Don't in France

Do say hello (“Bonjour”) upon entering an establishment (ie. store, restaurant, etc) before you begin browsing or asking questions. Never leave a store/restaurant without saying “merci” and “au revoir”.

It is expected for friends to greet each other with a kiss while strangers shake hands. Friends also kiss when saying goodbye. It is usually a double kiss on both cheeks (in some regions, people can kiss 4 times, if you don't know, wait to see what the other person does).

Do not use “Tu” (you) to address another person unless that person is quite familiar to you. Use “Vous”, as it is more formal. If in doubt, use “Vous”.

Do not assume everyone speaks English. It is recommended to start a conversation politely by saying “bonjour, excusez-moi, parlez-vous anglais?”

Do not assume all stores will be open between 12-2 pm, as this is when most people have lunch. Most shops are closed after 7:00pm, or 8:00pm for malls.

Don't put your feet on seats/tables. Don't sit on the floor or on tables during an industrial visit.

If you take the metro, let people leave before you go in.

Pharmacy

You will have no difficulties in finding a pharmacy anywhere in France. Pharmacists can give you advice if you have a minor health problem. Always ask for a receipt when you buy medicine even though you might not be reimbursed in your country. There is always a pharmacy on duty during weekends, on a bank holiday or at night.

Budgeting

Depending on the exchange rate (check out www.xe.com for current rates), daily life in France can be a little pricey for an American. The following examples can help you in preparing a budget for your time abroad.

- Dinner out: 15€ - 20€
- Sandwiches and kebabs: 3€ - 5€
- Ice cream, one scoop: 2€
- Coffee: 2€
- Movie: 5€ with student ID
- Large bottle of water: 1€
- French pastries: 1€ - 3€

In France, all prices in stores are inclusive of tax unless they specifically mention HT (hors taxe). It is not an obligation to tip waiters for instance unless service is exceptional.

Sports

You can get a membership card to the “Association Sportive” for 3€, which gives you access to all the sports facilities on the Supaero campus (tennis, basketball, volleyball & squash courts, soccer field, indoor pool).

Access to all ENAC sports facilities is free with your student card. They are nevertheless organized and shall be reserved.

ISAE-ENSMA also has a gym and you will be able to enter thanks to your access card.

Library

There are Libraries in the schools. You may read books and newspapers but cannot check them out.

ACCOMMODATION

ENAC Residence Hall and Campus



Opening hours of residences' secretariats:

If you need help from the residence desk, each hall has specific open hours. You will be accommodated at Clément ADER, however if the desk is closed, you will need to call or go to Roland GARROS.

✈ Louis BLERIOT Monday to Friday from 9:30 am to 12:30 pm and from 2:30pm to 7:30pm

✈ Clément ADER Monday to Friday from 9:30 am to 12:30 pm and from 2:30pm to 7:30pm

✈ Roland GARROS Monday to Friday from 7:00 am to 9:00pm

✈ Weekends and public holidays, reception is at Roland GARROS from 7am to 9pm

☹ **There is also a security guard on duty** at ADER apartments and you may check in with him every day (weekends and public holidays included) from 9pm to 7am. To contact him, dial 05.62.17.45.28. You can use the phone in the hall of your residence.

CHECK IN / CHECK OUT PROCEDURES AT ENAC RESIDENCE

Anyone applying for a flat at ENAC Campus must respect the Residence Rules – a booklet is available in every room.

The resident also agrees on the following procedures:

CHECK-IN:

In case of a late arrival (after 9 pm), the resident should meet with the group leader or the security officer by calling 05.62.17.45.30. The officer will provide the resident with a pass and room number. A room inventory, signed by the resident and a member of ENAC will be established upon arrival.

CHECK-OUT:

The information below is valid for all kind of rooms of the residence.

Students must give one-week notice to inform the secretariat about their departure and an appointment must be organized to do the inventory. The group leader will help you on this matter.

A room inventory, signed by the resident and a member of ENAC will be completed on the departure date.

If students need to leave outside office hours, a pre-inventory will be done on the day before departure. In that case, the student will be charged for a 20 minute cleaning (20,40€) and he/ she will agree by principle with the actual check-out inventory and the inventory will be sent later to him/her.

The student must give back the following things on the day of departure:

- access card
- ethernet cable (if applicable)
- bed linen and towels (if applicable)

The check-out inventory will start on time and the student is expected to be ready. The room must be clean and empty for the check-out. The room will be inspected and extra cleaning or repairs will be at the student's own expense.

The resident shall give ENAC a valid and complete postal address where any document for billing may be sent.

The rent of the room shall be paid to ENAC accounting office (building D2) on the day before departure at the latest before 4:00pm, on presentation of a check-out form available at the reception. The rent can be paid by cash, or credit card.

Accounting office

Office hours:

→ Monday to Friday: 8.30 to 12.15 pm. ; 1.00pm to 4.00 pm.

☎ Phone: 33 (0) 5 62 17 44 56

Fax: 33 (0) 5 62 17 44 75

Office hours of the secretariat:

Roland Garros

Monday - Friday: 7.00 a.m. to 11.00 p.m.

Weekend and holidays: 7.00 p.m. to 9.00 p.m.

Tel: 05 62 17 45 30

Clément Ader & Louis Blériot:

Monday - Friday : 9.00 a.m. to 12.30 p.m. / 2.30 p.m. to 7.30 p.m

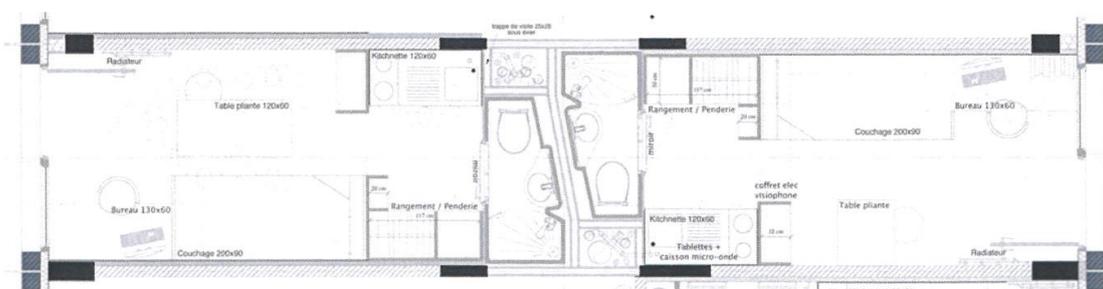
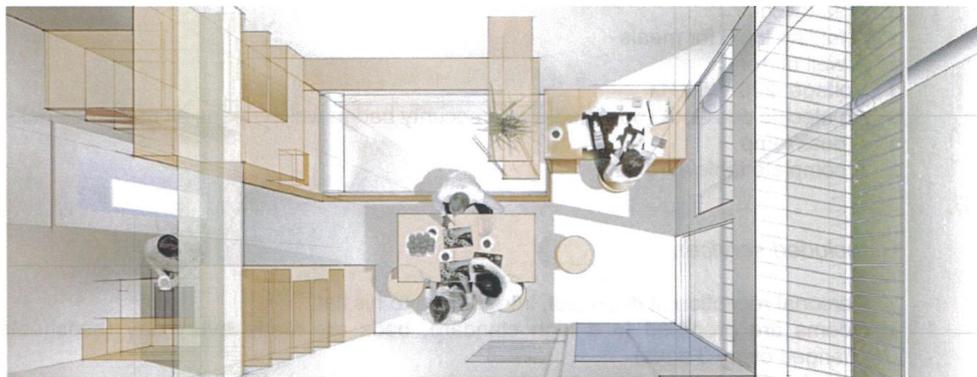
Equipment of studios and small studios (“studettes”):

- A 200 x 90 cm/79in.x35in. bed (with blanket, bolster, etc...)
- A desk large enough for a desktop computer
- A small kitchen with cupboards, a sink, two electric hot plates and a fridge (110 litres)
- a shower, a washbasin, and toilet
- A wardrobe and shelves
- A storage space for big suitcases
- Book-cases
- A study chair
- A folding table for meals, and a stool
- A full-length wall mirror
- A desk lamp
- Crockery
- A set of sheets, blankets, and towels with minimal toiletries at the start
- A triple-function socket (for FM, Satellite and **Digital Terrestrial Television/DTTV**), and ADSL network socket
- Free access to the internet via ethernet (RJ45 connection in use since 2010)
- Voltage: 230 V 50 Hz
- An electric door lock (operated with an access card which opens all residence halls)
- An interphone



Apartment/room layout

Small studios of 12m² / 14m² (in ADER and BLERIOT residence halls)



Other services and amenities

The following services are available on campus:

- A self-service laundry in Ader residence hall. The laundry includes 10 washing machines and 4 dryers. Cards for the washing machines can be purchased in from the front desk in Résidence 2; they cost 10€ each and are good for 5 loads.
- For €13,20, you can have your sheets, blankets and towels replaced every 2 weeks
- Cleaning service (studio: €30, room: €15, small studio: €25, 20 minute-cleaning: €20,40)
- Free access to the Internet in the residence hall
- Vending machines (cold & hot drinks, cold sandwiches, precooked dishes to warm up (not at Ader))
- Sport facilities: 5 tennis courts, 1 training room, 1 synthetic sports field, 1 gymnasium (on booking)
- TV room (on the ground floor of Résidence 1 and in the basement of Résidence 2). Students can borrow a key from the Poste de Garde for the Auditorium in Résidence 3 to project films on the big screen from their laptop.
- Free access to international channels in the Ader residence hall
- A lounge (on booking)
- A self-service restaurant and cafeteria
- “bar & grill” (run by students) on the ground floor of Résidence 1, where you can have cheap drinks and food (burgers, spaghetti, etc). The Foyer also hosts parties and concerts.

Contact and access

Contact:

Accommodation Manager
Phone: +33 5 62 17 45 22
Fax: +33 5 61 25 31 71
E-Mail: hebergement@enac.fr

Service Hébergement
Résidence Blériot
7, avenue Edouard Belin
BP 54005
31055 Toulouse Cedex 4
FRANCE

Address:

- Access:
- **with public transports:** Underground line B (“Fac de pharmacie” station) and Bus lines 37, 68, 78 (“ENAC” bus stop to Fac de pharmacie or Ramonville)
→ <http://www.tisseo.fr/>
 - **By bike** (citywide bike rentals):
“Vélo-Toulouse” service (“ENAC” station, nbr 223)

Accommodation in Poitiers, ISAE-ENSMA

You will be stay in Residence Séjours & Affaires Poitiers Lamartine during the week at ISAE-ENSMA. It is located next to the train-station, and 10 minutes by foot from the city center of Poitiers.

Résidence Lamartine

14 boulevard du Pont Achard

86 000 POITIERS

Tel: + 33 5 49 58 96 38 <http://www.estudines.com/residence-logement-etudiant-poitiers-14-24.html>

The breakfast is served from 7.00 a.m. from Monday to Saturday. The hotel does not serve dinner.

Opening hours of the reception:

- From Monday to Thursday: from 7.00am to 12.00pm and from 2.00pm to 8.00pm
 - Friday: from 7.00am to 12.00pm and from 2.00pm to 7.00pm
 - Saturday: from 7.00am to 12.00pm
- Closed on Saturday afternoon, on Sundays and public holidays

Accommodation in Montpellier, Marseille and Arcachon

Hotels will be booked for students and staff in Montpellier, Marseille and Arcachon. Information will be given to you upon arrival.

MEALS

➤ Meals at ENAC

- **Restaurant opening hours:**
 - Week days: 11:30am to 2:00pm and 7:00pm to 8:30pm
 - Weekend: 12:00pm to 1:00pm and 7:00pm to 8:30pm
- **Cafeteria opening hours:**
 - Week days: 7:15am to 3:00pm
 - Weekend: closed
- **Prices for students:**
 - meal regular price: approx. €6
 - breakfast: €2,40 (cafeteria)

➤ Meals at ISAE-SUPAERO

ISAE RESTAURATION

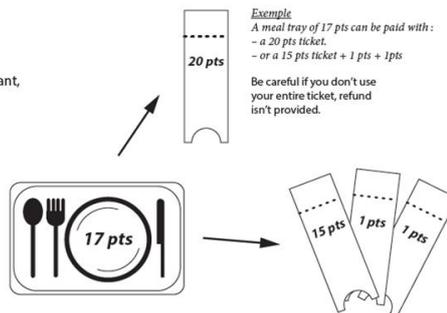


How do meal tickets work ?

Each dish of the menu are worth a different number of points. The total points of your meal tray depends on the sum of all your dishes. To lunch at ISAE restaurant, you **have to give a 15 pts ticket or 20 pts ticket** (includes admission). You can **complete by 1 pts tickets** if your meal is over 15 pts or 20 pts. However it is impossible to only pay with 1 point ticket.

Tickets have no expiration date in time. They will still be valid when Izly electronic card will be in use.

15 pts ≈ Starter & dish or Dish & dessert
 20 pts ≈ Starter + Dish + Dessert.



RATES PER CATEGORY

Give your Izly card at the counter !

	STUDENTS, TRAINEES	ASA, PHD STUDENTS, MILITARY	SELF	VISITORS	AUTHORIZED MEMBERS
Book of 10 pts (so 10 x 1 pts) to complete...					
1,56 € <i>lot of 10 pts</i>	Breakfast 1,58 €	15 pts 4,22 €	15 pts 5,44 €	BRKFST 3,25 €	20 pts 8,02 €
	15 pts 3,25 € 20 pts 4,03 €	20 pts 5,00 €	20 pts 6,22 €	20 pts with drinks or 25 pts 10 €	

Sold individually

➤ **Meals at ISAE-ENSMA**

You will be given meal tickets during your stay at ENSMA which will allow you to have lunch at the university restaurant Gémini, which is next to the school, just 2 minutes' walk. The dinner will be at your charge.

Gemini restaurant is open from Monday to Friday from 11:45am to 1:30pm.

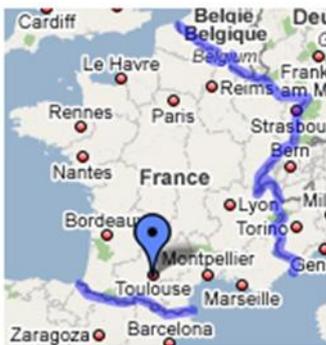
➤ **Meals in Montpellier, Marseille, Bordeaux and Arcachon**

Breakfast and one meal a day (during weekdays) will be provided.

Toulouse

Also called the “Pink City” (la ville rose), because of its rosy-toned brick buildings, Toulouse is the 4th largest city in France with nearly 450,000 inhabitants (850,000 including the suburbs).

Ideally located at the heart of Southwestern France, between the Mediterranean Sea and the Atlantic Ocean, Toulouse, with its unique rich history features a joyful combination of heritage and “art de vivre”.



La Mairie de Toulouse – Toulouse City Hall

Getting around Town

Metro and bus are the best way to get around town. You can obtain metro/bus maps and city maps as well as other useful information from the Tourism Office, behind the City Hall.

You can use many different metro/bus ticket options. A one-way ticket is 1€60; a round-trip ticket costs 2€80. A “ticket soirée,” or night ticket, costs 2€50 and gives you unlimited trips after 7pm. Many students buy a Tisséo Pastel card if they are less than 26. The card costs 8€ (you need a passport photo). With this card, you can buy 10 trips for 4€ each, or a month of unlimited trips for 10 euros only.

Getting into the city center from ENAC & ISAE-SUPAERO

There are three ways to get into the city center from Enac / ISAE-SUPAERO. The easiest option is to take the metro which is about 10-minute walk from campus. You can also rent a bike for the duration of your stay. A paved path along the Canal du Midi leads straight into town. Of course, you can also walk; however, it takes at least one hour to get to the city center on foot!

Helpful Links

- Toulouse Tourism Office: <http://www.toulouse-visit.com/>
- Metro and bus network: <http://www.tisseo.fr/en/home>
- City Guide: <http://www.lepetittou.com/>
https://www.yelp.com/toulouse?utm_campaign=Cityvox_redirect&utm_medium=Cityvox_website&utm_source=direct
- Americans in Toulouse Club: www.americansintoulouse.com

Poitiers

Poitiers is located in western France between Bordeaux and Paris and belongs to the Aquitaine Limousin Poitou-Charentes region. With nearly 150,000 residents (including the suburbs), it is sometimes referred to as the “plus petite des grandes villes”: the smallest of the big cities. Enjoy a nice walk in the pedestrian streets, relax in Parc de Blossac, or taste good food in one of the restaurants of the city center.

Useful links:

<http://www.ot-poitiers.fr/>

<https://www.poitiers.fr/>

www.mairie-poitiers.fr



Notre Dame La Grande



ISAE-ENSMA Campus

Montpellier

Montpellier is the 7th-largest city of France, and is also the fastest-growing city in the country over the past 25 years. It is easy to fall in love with the historic centre Écusson and the maze of old alleyways and narrow streets, packed with elegant town houses, trendy stores and restaurants. This city in the south of France is an authentic university town with live music on almost every corner and patios that are packed until late at night.

Only the tram has access to the city centre; the historic core of Montpellier is completely free of cars so visitors can peacefully stroll around. The lively heart of the city is Place de la Comédie, a large square that exudes 19th-century glamour and a monumental fountain across from the opera. But the best spots for a drink are found in the fascinating maze of old streets and squares in Écusson.



Helpful links:

- Montpellier Tourism Office: <https://www.montpellier-tourisme.fr/>
Montpellier city hall: <http://www.montpellier.fr/>



Marseille

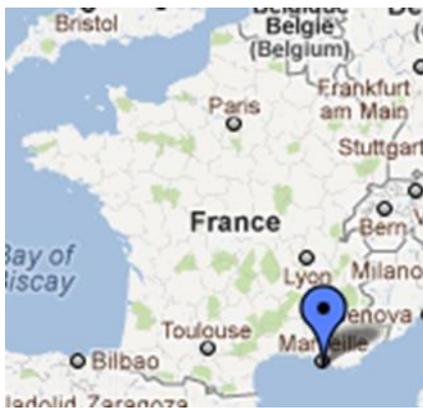
Marseille is a typical city on the Mediterranean Sea, where you will enjoy the famous Calanques, the bouillabaisse, and Notre Dame La Grande church.

Nestled between the sea and hills, Marseille is a surprising, seasonless and enthusiastic city. Founded 2600 years ago, the oldest city in France combines the richness of its unique heritage with a vibrant cultural life in one exceptional site.

Sometimes endearing, sometimes rebellious, it loves to seduce the visitor who is rarely indifferent to the charm of its 111 districts, its mild climate and the mysteries of its gastronomy.

As France's second largest city, Marseille recalls the values of sharing that have shaped its territory for centuries, maintaining in its name "Marseille" the memory of the ancient Greek from Asia Minor that participated in its founding.

A port city with a strong identity, it has also managed to support the changes in time to become an unavoidable capital of the Mediterranean, open to the world.



Marseille, a port city

Helpful Links

- Marseille Tourism Office: www.marseille-tourisme.com/
- Marseille City Hall: www.marseille.fr/



The calanques

Bordeaux & Arcachon Bay

You will be raising your glass many times in Bordeaux, which is renowned for its wines, considered amongst the best in the world. As the capital of the department Gironde in the region Nouvelle Aquitaine, it has one million inhabitants in its metropolitan area at a 2008 estimate. After years of neglect, the former wet docks are the country's new hot spot, with a number of cafés, gardens, and museums springing up all the time. A lively university community of over 60,000, (Bordeaux Campus is the largest in France) establishes that Bordeaux is about more than just wine.

The most interesting way to explore the city is by walking. As most of the town center is a 'pedestrian area', this is easy to do. If you like sports, you can rent roller-skates or a bike or you can make your way in town using the various bus lines. A small ferryboat permits to go from the western shore of the river to the eastern shore, and vice-versa.



Jardin des Lumières

Arcachon Bay is a bay of the Atlantic Ocean situated between the Côte d'Argent and the Côte des Landes, known as 'Le Bassin' ('The Basin') by local people, it's situated in the department of Aquitaine and Gironde. The bay covers an area of 150 km² and is a place of extraordinary beauty.

Arcachon also has Europe's longest and highest dune of sand: La Dune du Pyla, which reaches 107 meters in height! The top of the dune offers stunning views of the entirety of Arcachon Bay.



La Dune du Pyla

Academic Program

Coursework

You can transfer from 3 to 9 credits (depending on your university) towards your degree upon the successful completion of this program. The program is composed of 5 academic modules, as well as conferences and visits of aeronautical industries and historical/cultural sites. Professors will give you the necessary handouts and materials for you classes, so you do not need to purchase any books in advance.

General Program

AEROSPACE ENGINEERING
Air Transport Economics & Aviation Safety
Aircraft Architecture & Structure Analysis
Fundamentals of Combustion
Aircraft Engines: Internal Aerodynamics of Propulsion Systems
Visits: Aeronautical and Historical/Cultural Sites

The following pages describe each of the modules in more detail.

Air Transport Economics

Objectives

After following the course, students should be able to:

- Describe the different actors in the air transport sector and explain their roles and the main interactions between them
- Describe the different types of airlines, and explain their principal strategies
- Explain the regulatory constraints and analyze their impact on the markets
- Explain the current challenges in air transport

Course description

The course describes the workings of air transport markets:

- Facts and figures
- Actors in the air transport industry and their interactions: passengers, manufacturers, airports, leasing companies, air navigation service providers
- Regulations of the air transport market
- Focus on airlines: figures, the various types of airline, cost breakdown, fares (principles and strategies), alliances, airline networks
- Competition on the market

This course is organized by ENAC.

Aviation Safety – Civil Aviation Organization

General Objective

After completing this module, the student will be able to present the aircraft safety oversight system through the applicable regulation and associated procedures.

Detailed Objectives

After completing this module, the student will be able to:

- Present the main international bodies (ICAO, EASA)
- Define the safety objectives for the civil aviation, and describe the regulatory means to reach to, and maintain that minimum level of safety
- Quote the applicable international (ICAO standards) and the European texts (airworthiness and associated domains)
- For each one of these domains, quote the main applicable certificates / approvals

- Remind the ICAO principles and the EASA Part 21 principles for airworthiness
- Describe the type certification /validation process (up to the issuance of the certificate of airworthiness)
- Describe the approval process applicable to changes to the type certificate
- Describe the in-service experience feedback process

Contents

	Description	(Lectures, tutorials, project, case study, personal work, exam etc.)	Duration (estimate)	Lecturer (University, Enterprise etc)
1	Introduction – safety objectives International safety programs	Lecture	2h	ENAC
2	International bodies			
2.1	ICAO and the Chicago Convention Annexes to the Chicago Convention - SARPs	Lecture	2h	ENAC
2.2	EASA: - Scope of competences - Regulatory structure - NPA process	Lecture	2h	ENAC
3	Type certification / validation Statements of conformity (production) Issuance of a certificate of airworthiness	Lecture (including exercises)	3h	ENAC
4	Post TC activities: - Approvals of changes to TC – STC - In service experience feedback – AD	Lecture	3h	ENAC
Total		Lectures	12h	

Aircraft Structures

(Specific module for Aerospace Engineering students)

Location :	ISAE-SUPAERO
Objectives :	<p>To provide a broad knowledge of the aeronautical structures: design, analysis and tests, maintenance</p> <p>To provide the methods for the static analysis of different parts of an aircraft (wings, fuselage, ...)</p> <p>To illustrate the relationship between the calculation methods and the physical phenomena (buckling of a spar, loads in a landing gear),</p>
Prerequisites :	Elasticity, strength of materials, long beams, plates and bodies
Contents :	<p>Lectures :</p> <ul style="list-style-type: none">- Design : materials, manufacturing methods, assemblies, sections breakdown, quality control, structure protection- Analysis and tests: FEM, loads, static analysis, fatigue & damage tolerance, other analyses, structure testing, particular risks analysis, failure cases- Maintenance, MPD, AMM, SRM, inspection methods, Service Bulletins- Static analysis : strength analysis methods, bending moment, torsion moment, shear force, pressurization, tension and compression, shear stress, stability, analysis of a wing box <p>Labs :</p> <ul style="list-style-type: none">- buckling of a spar, loads in a landing gear, manufacturing of composite materials plates
Duration :	14 sessions of 60' each
Professor :	Marc ROLIN Jean-Fred BEGUE
Bibliography :	E.F. Brunh, Analysis and design of flight vehicles structures, Tri-state offset company, 1973
Evaluation :	Written exam (midterm quiz)

Fundamentals of Combustion

Location :	ISAE-ENSMA
Objectives :	To provide fundamental knowledge of thermodynamics applied to reactive systems in order to better understand related phenomena: flames. To provide fundamental knowledge of combustion, and the methods and means of calculating effects on the surroundings.
Prerequisites :	Basic fluid mechanics and thermodynamics, shocks, waves of small amplitude
Contents :	<p>Courses : Generalities on combustion of solids, principles, regimes, process stabilization, types of flame, solid fuel and solid propellants, conduction, gasification, radiation, heat transfer, ignition, burning velocity calculation, heterogeneous combustion, ... Generalities on thermodynamics, gasdynamic discontinuities, application to supersonic and hypersonic propulsion. Application to rocket propulsion and fire safety analysis. Development of a theoretical model for gas-solid and liquid-gas combustion.</p> <p>Project : Numerical calculation of the governing thermodynamic parameters of the Rocket propulsion The main objective of this project is the calculation of the performance of rocket engines Vulcain (Ariane) and SSME (Space Shuttle Main Engine) by studying the thermodynamic cycle corresponding to the operating conditions of these engines. This study is performed using a numerical code of chemical equilibrium. The predictions of these calculations will be compared to the manufacturer data.</p> <p>Lab works: Experimental study of the flame propagation in an open space The main objectives of this laboratory work are the determination of the velocity propagation of a flame in an open space and the evaluation of the acoustic effects on the ambient atmosphere.</p>
Duration :	18 sessions of 60' each
Professors :	Zakaria BOUALI, Djamel KARMED, Vincent ROBIN
Bibliography :	<p>Pope, S.B., <i>Turbulent flows</i>, Cambridge University Press, 2000. Turns, S.R., <i>An introduction to combustion: concepts and applications</i>, Mac Graw Hill International Editors, Mechanical Engineering Series, 1996.</p> <p>“Compressibility Effects of Unreacted Propellant on Thermally Choked Ram Accelerator Performance” (P. BAUER and C. KNOWLEN), Eur. Phys. J. Appl. Phys., 21, (2003), pp.233 – 238</p> <p>D. Honoré, B. Lecordier, A. Susset, D. Jaffre, M. Perrin, J-M Most, M. Trinité, « Time resolved particle image velocimetry in confined bluff body burner flames », Experiment in Fluids (supp), pp S248-254, 2000</p>
Evaluation :	Written exam (quiz)

Aircraft Engines

Internal aerodynamics of propulsion systems

Location :	ISAE-SUPAERO
Objectives :	The purpose of this course is internal aerodynamics of air intakes (subsonic, supersonic and hypersonic), of compressors and turbines (rotors and stators), and nozzles of turbojets engines and rocket engines (influence of viscosity, stalling criteria, reattachment, shock waves...) .
Prerequisites :	General aerodynamics, fluid mechanics
Contents :	Generalities on Propulsion, functioning of subsonic and supersonic air intakes (without and with mouse, shocks position, surge), friction and stalling problems in nozzles Dimensioning of compressors and turbine cascade blades (rotors and stators), associated criterias.
Duration :	16 sessions of 60 each
Professor :	Alain CARRERE
Bibliography :	"Propulsion Elements" by A. CARRERE (SUPAERO Edition)
Evaluation :	Written exam (midterm quiz)

Technical and Historical/Cultural Visits

Please be aware that the industrial visits are different each year. The program will be given to you upon arrival. You will have the chance to visit industrial sites such as Airbus, etc.

- ✓ You are expected to dress in professional business attire for these visits, (no t-shirts, jeans, shorts, flip flops, etc).
- ✓ Please always keep your passport with you as you will be asked to show it each time you enter an industrial site.

The objective of these visits is to present the company, its activities, production line.

At the end of the series of visits, the student will have a better knowledge of European aerospace industry, an overview of aircraft and aircraft equipment manufacturing, as well as career opportunities in the field. Air traffic control facilities will be visited to complete the perspective on the operation of air transport.

Guided tours of several cities will also be organized (Toulouse, Carcassonne, Poitiers etc.).

The objective of these visits is to introduce the student to the history and culture of the city and its surroundings from its founding up until present.

Guided tour last 2-2h30 in English with a professional guide accredited by the local tourist office.

Writing tips for your reports

You will write all your reports with a partner except the report about your personal experience (which is an individual work).

→ Include the names of the authors in the upper left hand corner.

→ All reports must include an introduction, structured body text and conclusion.

→ The reports should not be a listing of comments/notes about your visits. Indeed, you are expected to give an organized presentation on the company/plant/facility/city you visited.

→ Write your report as if it would be used to give a lecture on the subject you believe is the core of the visit.

→ Conclude with a summary of your main observations and write about what you learned through the visit. Make sure this portion addresses the objective you stated in the introductory part of the report.

→ Pay careful attention to punctuation, spelling, grammar and style

→ Proofread your report and have several people proofread it as well

Methods of assessment

- 4 multiple choice quizzes
- 8 reports about your visits
- 1 individual report about your experience
- class attendance and visits are mandatory

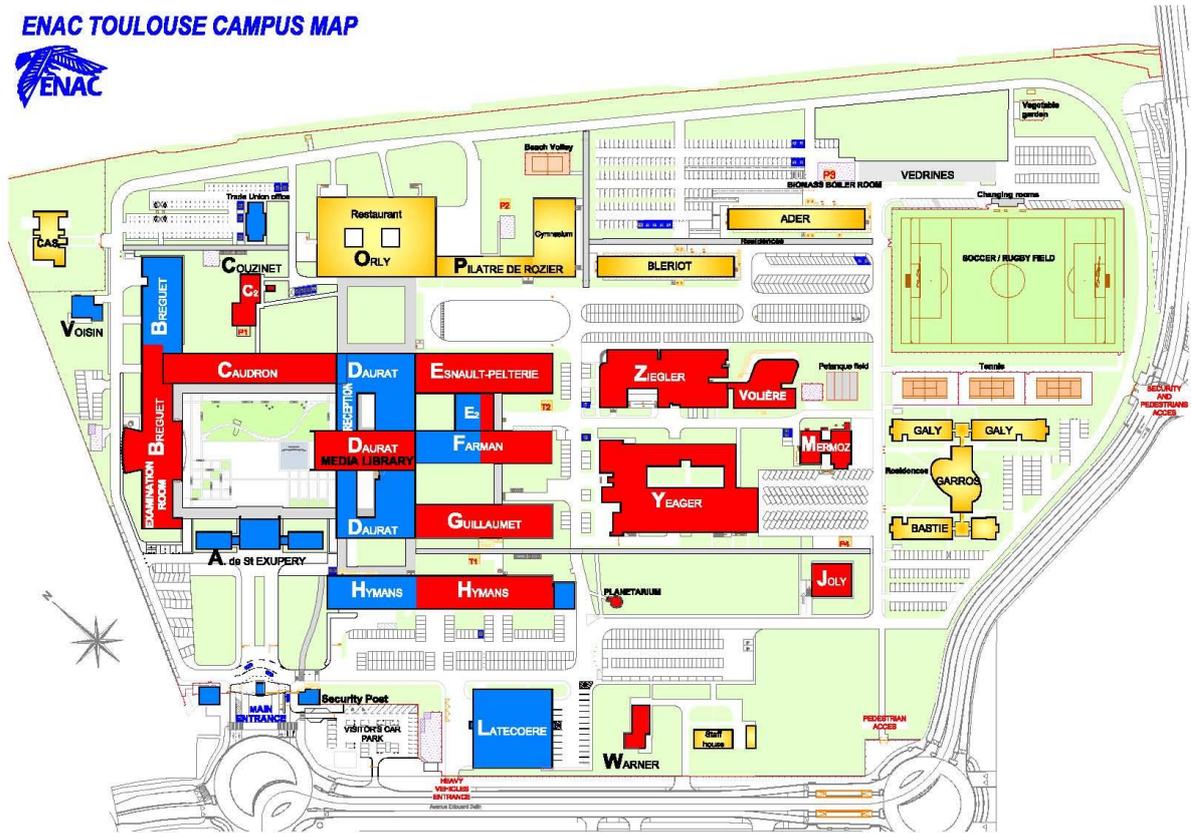
Grading System

AVIATION SPACE PROGRAM 2018: Grading system						
Number of points (total points: 200)	Interm. Report	Quiz 1	Quiz 2	Quiz 3	Quiz 4	Total
MODULE 1: Air Transport Economics & Aviation Safety						
Air Transport Economics Aviation Safety Concepts		25				25
MODULE 2: Aircraft Architecture & Structure Analysis Structure						
Analysis of loads on aircraft structure			25			25
MODULE 3: Fundamentals of Combustion						
Fundamentals of Combustion				25		25
MODULE 4: Internal Aerodynamics of Propulsion Systems						
Internal Aerodynamics of Propulsion Systems Aerodynamic Flow simulation					25	25
MODULE 5: Comprehensive Cultural Module and Technical Visits						
Visit 1	10					
Visit 2	10					
Visit 3	10					
Visit 4	10					
Visit 5	10					
Visit 6	10					
Visit 7	10					
Visit 8	10					
French culture	20					
Counting for the "Technical Elective" Credit	0	25	25	25	25	100
Counting for the "Cultural Elective" Credit	100	0	0	0	0	100

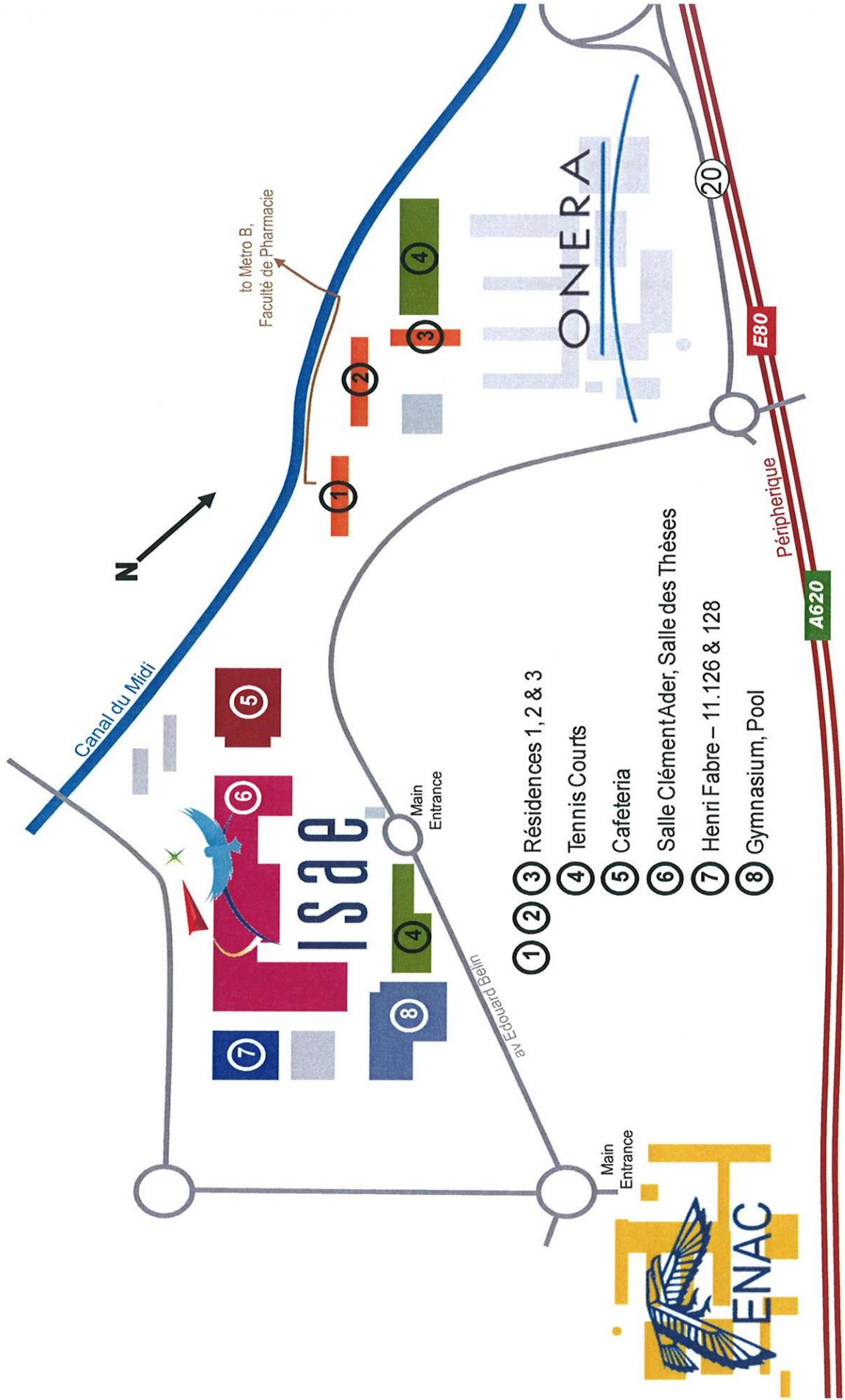
Transcripts

Official transcripts will be sent to your university after the program to allow you to get your U.S. credits. Please check with your home university to understand how these credits will be transferred.

ENAC TOULOUSE CAMPUS MAP

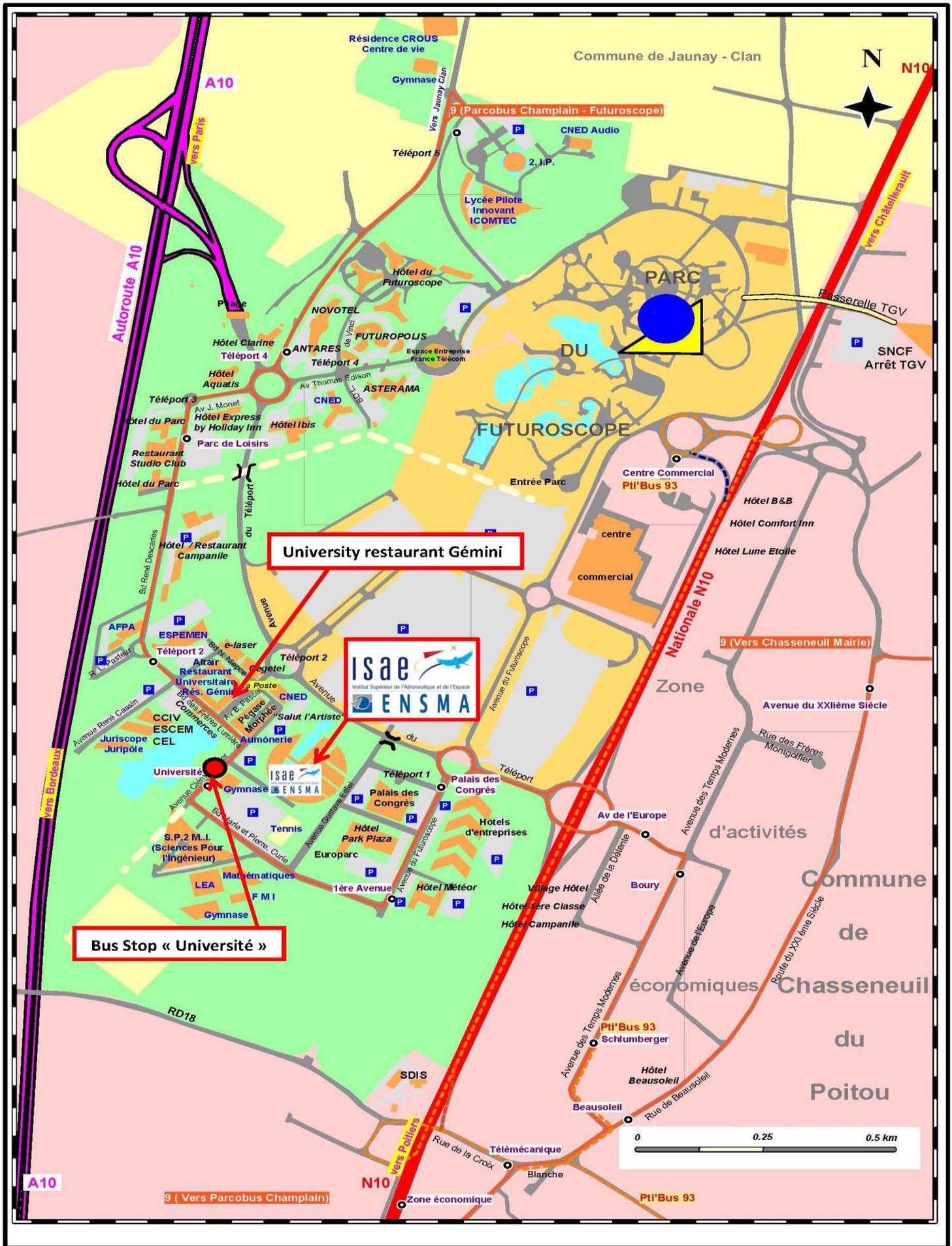


ENAC Administration	Building	ENAC Teaching	Building	ENAC Village	Building
Reception - Information	Daurat	Air Traffic Management Department (ATM)	Esnault-Pelterie	Residence Halls	Ader, Bastié, Blériot, Galy, Garros
General Management (DG)	A. de Saint Exupéry	Department of Air Navigation Engineering and Sciences (SINA)	Farman, Caudron, Guillaumet, Joly, Ziegler	Gymnasium	Pilatre de Rozier
Department of Studies and Research (DER)	A. de Saint Exupéry	Languages, Humanities & Social Sciences Department (LH)	Caudron	Sports rooms	Pilatre de Rozier
International & Development Division (DID)	A. de Saint Exupéry	Air Transport Department (TA)	Hymans	Leonardo da Vinci Centre	Orly
Department of Quality, Safety and Security on Sites (QSSES)	A. de Saint Exupéry	Regulations & Security (TA)	Warner	« Pocket » Theatre	Orly
Directorate Cabinet (CAB)	A. de Saint Exupéry	Innovation and Research Unit (URI)	Ziegler	Cafeteria	Orly
Pilotage training and flight training Division (DFPV)	A. de Saint Exupéry	Operations department (OP)	Hymans	Restaurant	Orly
General Secretariat (SG)	Hymans	ACHIL Laboratory	Hymans	Student Center	Orly
Human Resources Department (RH)	Hymans	Bellonte Lecture Hall	Bréguet	Childcare Center / Social & Cultural Activities	CAS
Finance Department (FIN)	Hymans	Costes Lecture Hall	Bréguet		
Department of Infrastructure & Logistics (IL)	Latécoère	Boucher Lecture Hall	Couzinet (Ca)		
Department of Information Systems (PSI)	Farman, E	Motor Laboratory	Mermoz		
Course Planning Office (DER)	Daurat North part	Examination Hall	Bréguet		
Department for Admissions & Campus Life (AVIC)	Daurat North part	Media Library	Daurat		
Education Support Centre (CAE)	Daurat North part	ATC Simulators	Yeager		
Academic Affairs (PPP)	Daurat South part	Drone avlary	Volière		
Accounting office (AC)	Daurat South part				
Health Safety and Environment Unit (CHSE)	Guillaumet Office G002				
Trade Unions	Syndicats				
Printing & Publishing	Bréguet				



- ① ② ③ Résidences 1, 2 & 3
- ④ Tennis Courts
- ⑤ Cafeteria
- ⑥ Salle ClémentAder, Salle des Thèses
- ⑦ Henri Fabre – 11.126 & 128
- ⑧ Gymnasium, Pool





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