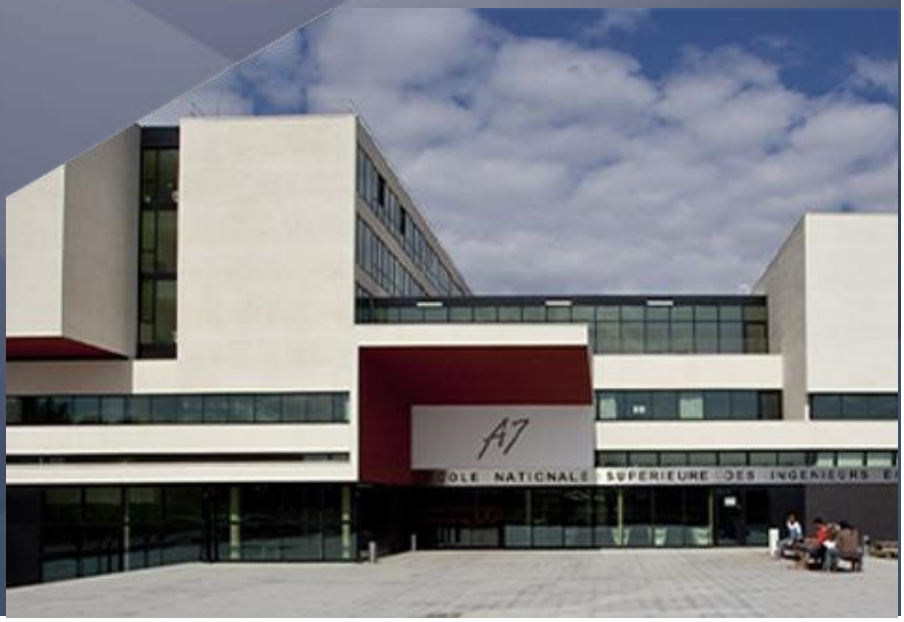
TOULOUSE INP Ensiacet

FACT SHEET 2024/2025

Toulouse INP ENSIACET

Toulouse Graduate School of Chemical, process engineering, materials science, and Industrial Engineering



International Office

internationaloffice@ensiacet.fr

INCOMING EXCHANGE PROGRAM TOULOUSE INP-ENSIACET / FACT SHEET

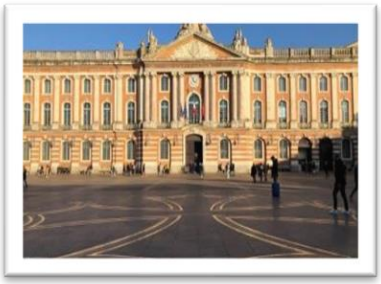
Name of the university	Institut National Polytechnique de Toulouse
Erasmus code	F-TOULOUS28
	https://www.ensiacet.fr

Toulouse INP-ENSIACET is a graduate engineering school. It is part of the "Institut National Polytechnique de Toulouse" (Toulouse INP university).

Located at a crossroads of two major axes:

- one linking the Mediterranean Sea with the Atlantic Ocean
- the other linking France to Spain

Toulouse is the 4th biggest student city in France with over 110 000 students.



Virtual tour of the campus: https://www.ensiacet.fr/en/direct-access/virtual-tour-of-the-campus.html

Access plan: https://www.ensiacet.fr/fr/plans-et-voies-d-acces.html

International office INP-ENSIACET

Toulouse INP

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Toulouse INP ENSIACET

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Exchange students

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International coordinator

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Information about the institution

Full legal Name	**Toulouse INP-ENSIACET**
Erasmus Code	**F-TOULOUS28**
Head of Institution	**Laurent Prat**

Study mobility

Incoming exchange students are required to register at least for 25 credits per semester. Our academic year runs over two terms – Autumn, Spring.

Catalogue of courses

Important! Students need to think carefully when making the study plan. It is compulsory to choose courses in the same level, semester and department. Toulouse INP Ensiacet does not have an Add & Drop period after arrival.

Semester	Department	Language	Courses	ECTS
Semester 6	Chimie 1A2SCH	FR	UE1 Devenir ingénieur responsable et écocitoyen	5
			UE2 Méthodologie analytique - Analyse de molécules/produits	13
			UE3 Conception et synthèse de molécules/produits	8
			UE4 Ingénierie des procédés chimiques	4
	Matériaux 1A2SIMAT	FR	UE1 Devenir Ingénieur Responsable et Ecocitoyen	5
			UE2 Déterminer et modéliser les propriétés et les lois de comportement des matériaux	7
			UE3 Elaborer et mettre en œuvre les matériaux en choisissant les procédés	9
			UE4 Décrire, analyser et caractériser les matériaux à différentes échelles	9
	Génie Chimique 1A2SGC	FR	UE1 Devenir Ingénieur Responsable et Ecocitoyen	5
			UE2 Comprendre les phénomènes physiques	7
			UE3 Analyser les molécules et produits	5
			UE4 Synthétiser les molécules et produits	4
			UE5 Concevoir des procédés durables	5
			UE6 Etude et dimensionnement Procédés	4
	Génie des procédés 1A2SGP	FR	UE1 Devenir Ingénieur Responsable et Ecocitoyen	5
			UE2 Sciences et outils de l'ingénieur	8
			UE3 Concevoir et améliorer (optimiser) des procédés durables	9
			UE4 Gérer l'énergie et les systèmes énergétiques	2
			UE5 Utiliser les outils et la simulation numériques	6
	Génie Industriel 1A2SGI	FR	UE1 Devenir Ingénieur Responsable et Ecocitoyen	5
			UE2 Ingénierie de projet	6
			UE3 Ingénierie de production	7
			UE4 Technologies de l'information et du numérique	6
			UE5 Ingénierie numérique et simulation	6
Semester 7	Chimie 2A1SCH	FR	UE1 Devenir Ingénieur Responsable et Eco-citoyen	5
			UE2 Conception et synthèse de molécules/produits en chimie inorganique	10
			UE3 Conception et synthèse de molécules/produits en chimie organique	10
			UE4 Ingénierie des procédés chimiques	5
	Matériaux 2A1SIMAT	FR	UE1 Devenir Ingénieur Responsable et Eco-citoyen	5
			UE2 Déterminer et modéliser les propriétés et les lois de comportement des matériaux	6
			UE3 Elaborer et mettre en œuvre les matériaux en choisissant les procédés	12
			UE4 Décrire, analyser et caractériser les matériaux à différentes échelles	7
	Génie Chimique 2A1SGC	FR	UE1 Devenir Ingénieur Responsable et Eco-citoyen	5
			UE2 Comprendre les phénomènes physiques	4
			UE3 Synthétiser	8
			UE4 Concevoir	8
			UE5 Conduire les procédés	5
	Génie des procédés 2A1SGP	FR	UE1 Devenir Ingénieur Responsable et Eco-citoyen	5
			UE2 Sciences et outils pour l'ingénieur	6
			UE3 Concevoir et améliorer (optimiser) des procédés durables	8
			UE4 Conduire les procédés et maîtriser les risques technologiques	4
			UE5 Utiliser les outils et la simulation numériques	7
	Génie Industriel 2A1SGI	FR	UE1 Devenir Ingénieur Responsable et Eco-citoyen	5
			UE2 Ingénierie des systèmes et de l'innovation	6
			UE3 Ingénierie des systèmes d'Information	6
			UE4 Ingénierie des systèmes productifs	8
			UE5 Systèmes industriels énergétiques	5
	GreenCap M1-1S	UK	TU1 Communication & Research	9
			TU2 Unit operations for industrial processes	8
			TU3 Mass transfer phenomenon	5
			TU4 Green processes for biomass	8
			TU5 Communication & Research	9

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Semester	Department	Language	Courses	ECTS
Semester 8	Chimie 2A2SCH		UE1 Devenir Ingénieur Responsable et Eco-citoyen	5
			UE2 Polymères : synthèse, propriétés et mise en œuvre	5
			UE3 Conception et synthèse de molécules/produits	7
			UE4 Maîtrise des outils pour une chimie durable	7
			UE5 Ingénierie des Procédés	6
	Matériaux 2A2SIMAT		UE1 Devenir Ingénieur Responsable et Eco-citoyen	5
			UE2 Déterminer et modéliser les propriétés et les lois de comportement des matériaux	8
			UE3 Elaborer et mettre en œuvre les matériaux en choisissant les procédés	10
			UE4 Décrire, analyser et caractériser les matériaux à différentes échelles	7
	Génie Chimique 2A2SGC		UE1 Devenir Ingénieur Responsable et Eco-citoyen	5
			UE2 Synthétiser des molécules et produits	8
			UE3 Concevoir des procédés durables	8
			UE4 Conduire les procédés	5
			UE5 Conception	4
	Génie des procédés 2A2SGP		UE1 Devenir Ingénieur Responsable et Ecocitoyen	5
			UE2 Sciences et outils pour l'ingénieur	5
			UE3 Concevoir et améliorer (optimiser) des procédés durables	11
			UE4 Conduire les procédés et maîtriser les risques technologiques	6
			UE5 Développer et appliquer les sciences de la donnée	3
	Génie Industriel 2A2SGI		UE1 Devenir Ingénieur Responsable et Ecocitoyen	5
			UE2 Management des projets	8
			UE3 Chaîne logistique durable	7
			UE4 Industrie du futur	5
			UE5 Management et sciences des données	5
	GreenCap M1-2S		TU1 Tools for green Chemistry	8
			TU2 Sustainable Processes	10
			TU3 Polymer Sciences	4
			TU4 Professionalization / project	6
			TU5 Internship in enterprise or research lab / OR / Research essay	2
Semester 9	Durabilité		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Déterminer et modéliser les propriétés et les lois de comportement des matériaux	4
			UE3 Décrire, analyser et caractériser les matériaux à différentes échelles	4
			UE4 Maîtriser le vieillissement des matériaux dans une démarche de conception durable	5
			UE5 Développer des matériaux à fonctionnalités spécifiques	5
	Fonctionnalité		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Déterminer et modéliser les propriétés et les lois de comportement des matériaux	4
			UE3 Développer des matériaux à fonctionnalités spécifiques	4
			UE4 Développer des matériaux à fonctionnalités spécifiques	5
			UE5 Décrire, analyser et caractériser les matériaux à différentes échelles	5
	Ingénierie Systèmes Industriels ISI		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Ingénierie et gestion de projets	5
			UE3 Chaîne logistique verte	5
			U45 Entrepreneuriat et ingénierie d'affaires	3
			UE5 Gestion de la donnée et des ressources	5
	Ingénierie et Maîtrise des Systèmes Industriels Complexes IMSIC		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Usine Digitale	5
			UE3 Chaîne logistique avancée	5
			U45 Entrepreneuriat et ingénierie d'affaires	3
			UE5 Systèmes et projets complexes	5
	Qualité-Sécurité-Environnement QSE		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Méthodologie d'évaluation des risques Professionnels	2
			UE3 Principes d'un système de management	2
			UE4 Procédés Propres	3
			UE5 Procédés sûrs et Prévention des risques professionnels	7
			UE6 Systèmes de management intégrés et Audit	4

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Semester	Department	Language	Courses	ECTS
Semester 9	Ingénierie Analytique IA		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Méthodologie d'évaluation des risques Professionnels	2
			UE3 Principes d'un système de management	2
			UE4 Technologies et Méthodologies Analytiques	7
			UE5 Gestion et Analyse de Données	4
			UE6 Assurance Qualité et Référentiels	3
	Chimie Fine et Bioprocédés CFiBio		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Appliquer les méthodes de chimie durable et écoconception	3
			UE3 Concevoir et optimiser les procédés durables	3
			UE4 Concevoir et synthétiser les molécules et produits I	3
			UE5 Concevoir et synthétiser les molécules et produits II	3
			UE6 Conduire des procédés et maîtriser les risques technologiques et professionnels	3
			UE7 Concevoir et optimiser des procédés durable	3
	Chimie Verte et Bioprocédés CVeBio		TU1 Professionalization	12
			TU2 Tools in green chemistry and processes	3
			TU3 Bioprocesses	3
			TU4 Formulation	3
			TU5 Conception of Bioproducts	3
			TU6 Alternative energies & catalysis	3
	Génie de l'Environnement CDEn		UE0 Remise à niveau	2
			UE1 Économie circulaire	4
			UE2 Hydrologie	4
			UE3 Milieux naturels	4
			UE4 Ingénierie et traitement de l'eau	4
			UE5 Ingénierie du développement soutenable	4
			UE4 Projet professionnel	8
	Conception et Analyse des Procédés Intensifiés CAPRI		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Concevoir, améliorer, optimiser les procédés (durables)	5
			UE3 Conduire des procédés et maîtriser les risques technologiques et professionnels	5
			UE4 Utiliser les outils et la simulation numérique	5
			UE5 Concevoir et optimiser des procédés durables	3
	Efficacité et logistique énergétique des systèmes ELEnSys		UE1 Devenir Ingénieur Responsable et Eco-citoyen	12
			UE2 Méthodes et outils logiciels	3
			UE3 Efficacité énergétique des systèmes	6
			UE4 Énergies Renouvelables & Récupérables (EnR&R) et décarbonation	5
			UE5 Management de l'énergie	4
	EcoEnergie		UE1 Conception systémique	8
			UE2 Smart-grids, Stockage et vecteur hydrogène	8
			UE3 Energies renouvelables	8
			UE4 Projet professionel	6
	Fluide et procédé FEP		TU1 Soft And Human Skills	5
			TU2 Turbulence and multiphase flows	5
			TU3 Multiphase flows processes	5
			TU4 Numerical simulations - process	5
			TU5 Processes : physics and modelling	5
			TU6 Transition Energétique et Energies Renouvelables	5

Master of science

Masters of Science are degrees accredited either by the French Ministry of Higher Education or by the « Conference des Grandes Ecoles », which conferred this trademark on engineering schools. Master of Science is internationally recognized and may lead to PhD programs or jobs in industrial companies.

The Master of Science is a 2-year full time program. It is usually aimed at undergraduate students who already have a Bachelor degree. The lectures are focused on specific scientific and technical fields.

- Master Green Chemistry and Processes for Biomass (Green CAP)
- MSc Industrial and Safety Engineering (ISE)
- Master Industrial BioTechnology for a Bio-Based Economy (BioTechEco)

Fees: 9000 Euros

French courses

Available and compulsory for exchange students. Free of charge with limited number of seats.

Toulouse INP organizes 2 summer schools. The first one is an Engineering summer school and deals with scientific matters, such as biorefineries, life cycle assessment, etc. The second one is a language summer school, and its goal is for participants to reinforce their communication skills in French as well as to help them understand scientific and technical courses and practical work in French.

Language requirements

The majority of the courses are taught in French. Exchange students must have an excellent French in order to succeed with their academic studies at Toulouse INP Ensiacet as all the classes are French. Engineering courses taught in French require a **French B2 level.**

If the student does not have the required level, he can choose a specialization taught in English (cf. catalogue courses).

Grading system

All grades at ENSIACET University are criterion-referenced, i.e. awarded in relation to the student's performance relative to the learning objectives set out in the course syllabus. They do not grade how well the student performs in relation to other students, but how well they fulfill the objectives of the course. ECTS grades are not awarded.

The French grading system is on a scale from 0-20. To pass a subject you usually have to get 10 points. A student is considered to have passed if at the end of each academic year the average of his/her grades is at least 10.

Grades	Description
Lower than 10	Failed
8 to 10	Retake
10 to 12	Sufficient
12 to 14	Good
14 to 16	Very good
16 to 18	Excellent
18 to above	Congratulation

Project research mobility

The study plan can be devoted to a **research project**. In this case, no French level is required. Our graduate engineering school also serves as a research center with support from the CNRS, INRA and other industrial partners. Research projects in Toulouse INP Ensiacet are intertwined with the teaching and applications within industries such as technology transfer and development. The goal is to further strengthen the knowledge and insure a keen application. Four national and international renowned research centers are associated with the school and highly involved in the competitiveness clusters and research networks:

Laboratory	Description
CIRIMAT: Centre Inter-universitaire de Recherche et d'Ingénierie des Matériaux-Innovative Materials Research Center	The scientific strategy is based on the continuum and balance between an academic research of the best international level and a strong partnership research oriented towards innovation. For this, CIRIMAT develops 4 perennial Scientific Axes: (i) Materials science and engineering, (ii) Nanomaterials , nanostructured materials, (iii) Coatings and deposition processes and (iv) Aging and durability of materials. In addition, Transverse Axes intended to promote synergies are put forward periodically. The three Transverse Axes 2021-2025 are: Biopolymers, Thermoelectric Materials, Hydrogen. CIRIMAT conducts multidisciplinary research on all families of materials (metals, alloys, ceramics, polymers, composites, multimaterials) in the form of powders, thin films, coatings, massive pieces, from their conception to their behavior in service. This research, both fundamental and applied, deals with current scientific questions in fields with strong industrial and societal impact: Aeronautics (aircraft and engines), Space, Energy (production and storage), Electronics, Health, Environment, Building.

Laboratory	Description
LCA: Laboratoire de Chimie Agro-industrielle-Biomass Conversion Research Center	Associated to INRA (French National Institute for Agricultural Research) through a co-funded research unit (1010 INRA/INP-ENSIACET), the LCA performs multi-disciplinary research in partnership with the academic, agricultural and industrial sectors. Our scientific strategy is to acquire knowledge on the chemical structures and properties of agro-molecules as well as to study of their reactivity. The final objective of our research is the non-food utilization of products and by-products from agriculture, forestry and agro-industries. In one word: the chemistry of "renewable carbon". Through this approach, the research at LCA associates Science and Technology of Agro-Resources with Chemistry and Chemical Engineering.
LCC: Laboratoire de Chimie de Coordination-Catalysis Research Center	The central theme on which the scientific policy of the laboratory is based is entitled: synthesis and reactivity in coordination chemistry and heterochemistry, around which the research of the LCC is articulated in three thematic axes at the interfaces with other disciplines: • Chemistry and catalysis: Fine chemistry, coordination chemistry and catalysis oriented towards sustainable development (Environment - Energy), • Chemistry and materials: Molecular materials at the interface with physics, nanosciences, nanotechnologies (Quantum Technologies), • Chemistry and Health: Bioinorganic chemistry and the role of metals in biology at the interface with the life sciences (Health).
LGC: Laboratoire de Génie Chimique	Interlinking Science and Technology, the LGC participates in the latest advances in Chemical Engineering and develops experimental and theoretical research for new insights at the core of processes of transformation of matter and energy. The LGC is supported by its three tutorships, the CNRS, the National Polytechnic Institute of Toulouse and the Paul Sabatier University of Toulouse. Through its six scientific divisions, the 300 staff of LGC address five major societal challenges: water and effluents, energy, bio-refinery, materials processing, safety management and health engineering.

Application and enrolment procedure

Nomination deadlines

April 30th: 1st semester for Autumn Semester / Full year
October 30th: 2nd semester for Spring Semester

All exchange students must be nominated by **their university's international office with sending an email to:** internationaloffice@ensiacet.fr with the following details:

- **Student's Gender**
- **Student's Full Name (Forename and Surname, the surname must be written as their ID)**
- **Student's Date of Birth**
- **Student's Nationality**
- **Student's Passport number**
- **Student's level**
- **Student's scientific field**
- **Student's Email**

Application

The students will receive an email after their nomination with all necessary information about the application online process, and the pre-registration form.
Required documents for the application: Transcript of records, Passport (or ID), Cover letter, Resume, Face photo, desired study plan.
Next, we send to the applicant and to the university a proposal of the learning agreement to sign. The applicant returns the signed learning agreement.

Enrolment

The students will receive an email with the online application form. After this registration, we send to the applicant and to the university the acceptance letter.

Student's life information

Visa

Visa and resident permit are essential if you plan to study in France. Visa requirement or not:

- EU citizens do not need a visa,
- Citizens of some countries, such as Mexico, do not need a visa for a stay of less than 3 months. For longer stays, a visa is required.
- Citizens of some countries need a visa regardless of the duration of their stay.

The official French visa website is: https://france-visas.gouv.fr

Accomodation

Acceptance to exchange studies does not guarantee housing. Students can apply for housing through Toulouse INP Ensiacet international office.

Important: We need the arrival date and departure date as soon as possible in order to book the room.

Accomodation in CROUS residence halls: 300 euros/month

Housing benefits: www.caf.fr

Catering

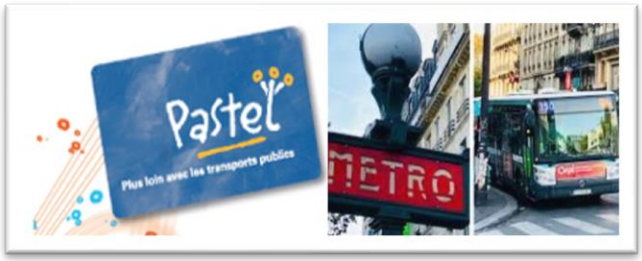
Located on the campus, the CROUS restaurant offers full meals (starter + main course+ dessert for 3,25 euros).

It is open from Monday to Friday at lunchtime. Payments are made with a Izly card - the student card (MUT card).

It is possible to recharge all of these cards in the restaurant itself.

Public transport

If the student wants to come via the public transport network, the student needs to take the subway line B until the Ramonville station, then to take the 79 bus and to get off at the INP stop.



Transport costs: 10 euros for the card and then 15 euros monthly (Have an ID picture ready)

Moreover, bike lanes come up to the campus from the city center, so it is possible to, ride a bike to the school!

Bank account

In France, the registration, insurance and rent payments are made by cheque (sometimes credit card), but not in cash.

Therefore, opening a bank account in France is strongly recommended. Citizens from the Euro-zone may not require to open a new account.

Health insurance

If the student is registering in higher education for the first time with a foreign nationality: he/she will need to register with the social security system in France through the website specifically made for students: etudiant-etranger.ameli.fr. This is totally free yet mandatory and will allow him/her to benefit from reimbursements for his/her health expenses.

The Social Security refunds up to 70% of his/her healthcare fees. If he/she wants, he/she can sign up for a healthcare insurance, that will cover the rest.