

EXCHANGE PROGRAM **2023-24**: FALL SEMESTER (S7)

I) CENTRALESUPÉLEC ENGINEERING CURRICULUM

CentraleSupélec is a French *Grande École*. Our Engineering Curriculum spans over 3 years (6 semesters).

Each semester comprises 2 terms:

- an **Engineering Challenge Term** (in French *Séquence Thématique* or “ST”);
- an **Academic Term** (in French *Séquence Générale* or “SG”).

French university system/ European Higher Ed system		French "Grande Ecole" System			
Bachelor	1st year	Scientific and technological training (preparatory classes or university)	1st year	Semester 1	
				Semester 2	
	2nd year	Scientific and technological training (preparatory classes or university)	2nd year	Semester 3	
				Semester 4	
Highly selective nationwide entrance examination					
Master	3rd year	CentraleSupélec	1st year	Semester 5	SG1
				Semester 6	ST2
	4th year	CentraleSupélec	2nd year	Semester 7	SG3
				Semester 8	ST4
	5th year	CentraleSupélec	3rd year	Semester 9	ST5
				Semester 10	SG6
				ST7	SG8
				SD9	SM10
					SM11
					Internship

Most of the exchange students are welcomed in the second year of the Engineering program, either during the Fall Semester “S7” (late August to late January) or the Spring Semester “S8” (February to mid-June), or both.

Below you will find more information on the organization of the Fall semester and the list of courses available during this period.

Detailed syllabuses can be found [in the 2022-2023 catalog](#).

Please refer to the course list below to know the language of instruction for each course.

Please note that changes can still occur before your arrival.

I) FALL SEMESTER ORGANIZATION

You are free to select any course from this program, taking into consideration several rules explained below.

The usual course load of the Engineering Program is 30 ECTS per semester.

At CentraleSupélec, we require exchange students to select a **minimum of ECTS**:

- Students applying for full-year exchange (S7+S8): **minimum 20 ECTS per semester**
- Students applying for 1 semester (S7 or S8): **minimum 15 ECTS per semester**

Please make sure to select enough courses to satisfy the requirements of your home university, but not below the minimum required by CS.

The school has 3 campuses: Saclay, Rennes and Metz. **Be sure to choose a full set of courses in one campus only.**

This document is for information purposes only. Course choices will be collected online via a link sent to nominated candidates.

	early Sept	mid Sept	mid Nov	late Nov	early Feb
Business Games ; Climate Science	ST5 Control Theory			Intensive week	SG6
	Economics, Law				Sociology of Organizations
	Language classes				
	S7 Project				
	Workshop sessions (1 for APP – 4 for API)				

“Engineering Challenge” Term, or *Séquence Thématique*: ST5

This term runs from September to mid-November, and comprises:

- **A course series including:**
 - An introductory module
 - A specific course
 - A Challenge Week, in French *Enseignement d'intégration*, scheduled at the end of the term (**choice of challenge week topic will be made upon arrival**)
- A common core course: **Control Theory**

Students interested in the Engineering Challenge Term are invited to choose 1 of the 14 “ST” topics, as well as a back-up in case their top choice cannot be accommodated.

Note on Control Theory:

The Control Theory course is not mandatory, but the concepts it covers can be important to follow the ST (except for ST 54). **You may consider taking it if you haven't followed a similar course at your home university.**

If you select Control Theory, you must commit to taking it until the end of the term.

Control Theory requires strong prerequisites in Mathematics and Systems Theory.

Academic Term, or *Séquence Générale*: SG6

This term runs from mid- November to late January, and comprises:

- **Up to 3 elective courses**

The courses are distributed in 3 series: 2.1, 2.2 and 2.3. All courses from a given series are scheduled in the same time slot. If you are interested in 1, 2 or 3 elective courses, **please select 1 “top” choice + 1 “back-up” per series.**

The semester also includes:

- A 1-week seminar scheduled at the beginning of September: **Business Games**. Choose this course only if you feel comfortable speaking French.

- An **intensive 1-week seminar** scheduled late November: if you are interested in this seminar, you may select:
 - One course related to a Humanities and Social Sciences topic (labelled **2IN2310, 2IN2320, 2IN2330, 2IN2340**). In this case, you will be requested to choose a specific module within the topic at a later stage
- OR**
- An additional elective course from the list below.
- OR**
- And experimental course from the list below.

If you are interested in this seminar, you may select 1 “top” choice + 1 “back-up” choice.

- Semester-long courses: **Economics, Law, Sociology of Organizations, Climate Science** and a **team project**.
- **Workshops:** Engineering Skills Workshops (“API”) and Professional Practice Skills Workshops (“APP”). The “API” workshops are mandatory for students involved in the S7 project. The “APP” workshops are mandatory for all students.
- **Language courses:** Students choose at least 1, and up to 2 foreign language(s) from the list. **Priority is given to French and English.** If you are already fluent in French and English, you may skip the language courses, or choose another language (highlighted in gray). **This option is available only if you have already had at least two semesters of study of the chosen language just prior to your arrival at CentraleSupélec, as beginner-level groups are not available in 2nd year.** You cannot select a language in which you are a native speaker.
- **Sports:** CentraleSupélec offers a range of sports courses which international students are encouraged to join, but for which they do not receive ECTS. If you are interested, please visit the Sports Office when you arrive on campus.

Please note that, due to limited seats in some modules (ST5, elective courses), your first choices may not be accommodated.

II) FALL SEMESTER COURSE LIST

You can use these tables to build your study plan before answering the online survey.

F: French E: English

Note on ST5: the 3 modules of the ST5 add up 5 ECTS. However, **the specific course and the project will be assessed separately and given their own marks.** There will be no assessment for the introduction.

SEQUENCE THEMATIQUE "ST5" / ENGINEERING CHALLENGE TERM							
Choice 1	Choice 2	FR Course title	Eng Course title	Course code	ECTS	Campus	Language of Instruction
□	□	Pilotage et contrôle de vol dans le transport aéronautique et spatial :	Piloting and Flight Control in Aeronautics and Space Transportation:	ST 51	5	Paris Saclay	F
		Intro: module contexte et enjeu	Introductory module	2SC5100	0		
		Performances et trajectoires de vol	Performance and Flight Paths	2SC5110	2,5		
		Stratégie de contrôle d'un nanosatellite OU	Control Strategy of a Nanosatellite OR	2SC5191	2,5		
		Définition et conception de la mission d'un lanceur OU	Definition and Design of a Launcher Mission OR	2SC5192	2,5		
Conception et pilotage d'un avion d'affaire	Aircraft Design	2SC5193	2,5				
□	□	Commande de bioprocédés pour l'environnement et les biofabrications :	Control of Bioprocesses for Environment and Biomanufacturing:	ST 52	5	Paris Saclay	F
		Intro: module contexte et enjeu	Introductory module	2SC5200	0		
		Génie des procédés: application à l'environnement et aux biofabrications	Chemical Engineering: Application to Environment and Biomanufacturing	2SC5210	2,5		

challenge week to be chosen upon arrival		Traitement biologique optimisé des eaux résiduaires urbaines OU Système de support de vie pour le spatial OU Supervision avancée de la production de biogaz à partir de déchets	Optimized Biological Treatment of Urban Wastewater OR Life Support System for Space Missions Advanced Supervision of Biogas Production from Waste	2SC5291 2SC5292 2SC5293	2,5 2,5 2,5		
<input type="checkbox"/>	<input type="checkbox"/>	Véhicule autonome et connecté : Intro: module contexte et enjeu Architecture et technologie du le véhicule autonome Conception d'un système de livraison urbaine "dernier kilomètre" par véhicules autonomes et connectés	Autonomous and Connected Vehicle: Introductory module Architecture and Technology of the Autonomous Vehicle Design of a "Last Mile" Urban Delivery System Using Autonomous and Connected Vehicles	ST 53 2SC5300 2SC5310 2SC5390	5 0 2,5 2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	L'éco-quartier, un système complexe. Aménagement durable & management de projet complexe : Intro: module contexte et enjeu Aménagement et urbanisme durable Projet de conception d'un éco-quartier	The Eco-Neighborhood, a Complex System. Sustainable Development and Complex Project Management: Introductory module Sustainable Urban Planning and Development Design Project fro an Eco-Neighborhood	ST 54 2SC5400 2SC5410 2SC5490	5 0 2,5 2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Lumière et matière: développement d'instruments de haute technologie: Intro: module contexte et enjeu Physique de la matière Conception d'un faisceau Synchrotron OU Lasers à cascade quantique	Light and Matter: Development of High Technology Instruments: Introductory module Physics of Matter Synchrotron Beamline Design OR Quantum Cascade Lasers	ST 55 2SC5500 2SC5510 2SC5591 2SC5592	5 0 2,5 2,5 2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Systèmes multi-énergies: Intro: module contexte et enjeu Introduction à la production d'énergie Régulation et commande de systèmes de production et de conversion d'énergie OU Groupe motopropulseur hybride OU Propulsion aéronautique hybride	Multi-Energy Systems: Introductory module Introduction to Energy Production Regulation and Control of Energy Production and Conversion Systems OR Hybrid Power Train OR Hybrid Aeronautical Propulsion	ST 56 2SC5600 2SC5610 2SC5691 2SC5692 2SC5693	5 0 2,5 2,5 2,5 2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Contrôle de la pollution acoustique et électromagnétique: Intro: module contexte et enjeu Théorie et algorithmique pour le contrôle des ondes Conception d'un revêtement afin de contrôler la pollution des ondes: Contrôle de la pollution acoustique extérieure OU Conception d'un revêtement afin de contrôler la pollution des ondes: Contrôle de la pollution acoustique intérieure OU Conception d'un revêtement afin de contrôler la pollution ndes: Contrôle de la pollution électromagnétique	Control of Acoustic and Electromagnetic Pollution: Introductory module Theory and Algorithmics for Wave Control Design of a Cladding: Control of External Acoustic Pollution OR Design of a Cladding: Indoor Noise Pollution Control OR Design of a Coating: Control of Electromagnetic Pollution	ST 57 2SC5700 2SC5710 2SC5791 2SC5792 2SC5793	5 0 2,5 2,5 2,5 2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Systèmes complexes industriels et critiques à logiciels prépondérants: Intro: module contexte et enjeu Conception et vérification de systèmes critiques Conception d'un système de signalisation sûre pour le ferroviaire OU Système intelligent pour le contrôle automatisé du trafic aérien OU Conception et analyse de systèmes de production pour les usines intelligentes	Complex Industrial and Critical Systems with Dominant Software: Introductory module Design and Verification of Critical Systems Design of a Safe Signalling System for the Railways OR Intelligent System for Automated Control of Air Traffic OR Design and Analysis of Production Systems for Smart Factories	ST 58 2SC5800 2SC5810 2SC5891 2SC5893 2SC5894	5 0 2,5 2,5 2,5 2,5	Paris Saclay	F

<input type="checkbox"/>	<input type="checkbox"/>	Assistance et autonomie de la personne: Intro: module contexte et enjeu Commande d'une chaîne de motorisation Conception d'un fauteuil roulant motorisé pour personne à mobilité réduite	Assistance and Autonomy of the Person: Introductory module Control of a Motorization Chain Design of a Motorized Wheelchair for People with Reduced Mobility	ST 59 SC5900 2SC5910 2SC5990	5 0,5 2,5 2,5	Metz	F
<input type="checkbox"/>	<input type="checkbox"/>	Navigation semi-autonome de drones: Intro: module contexte et enjeu Robotique autonome Inspection de bâtiment par un drone (quadricoptère) semi-autonome	Semi-Autonomous Navigation of Drones: Introductory module Autonomous Robotics Building Inspection by a Semi-Autonomous Drone (Quadricopter)	ST 60 2SC6000 2SC6010 2SC6090	5 0,5 2,5 2,5	Metz	E
<input type="checkbox"/>	<input type="checkbox"/>	Systèmes photoniques intelligents pour le contrôle et la mesure: Intro: module contexte et enjeu Photonique pour le contrôle des systèmes physiques Télédétection laser (LIDAR) pour la surveillance optronique et la détection de cibles	Smart Photonics Systems for Control and Measure: Introductory module Photonics for the Control of Physical Systems Laser Remote Sensing (LIDAR) for Optronics Surveillance and Target Detection	ST61 2SC6100 2SC6110 2SC6190	5 0 2,5 2,5	Metz	E
<input type="checkbox"/>	<input type="checkbox"/>	Intelligence énergétique et smart building : Intro: module contexte et enjeu Communications à haute performance énergétique OU Architecture Système et Modélisation Pilotage hiérarchisé du confort thermique Pilotage à distance du confort thermique	Energy Intelligence and Smart Building: Introductory module High Energy Performance Communications OR System Architecture and Modeling Hierarchical Management of Thermal Comfort Remote Control of Thermal Comfort	ST62 2SC6200 2SC6210 or 2SC6310 2SC6291 2SC6292	5 0 2,5 2,5 2,5	Rennes	E
<input type="checkbox"/>	<input type="checkbox"/>	Systèmes intelligents et embarqués pour la santé : Intro: module contexte et enjeu Communications à haute performance énergétique OU Architecture Système et Modélisation Système intelligent pour la régulation personnalisée de glycémie	Smart and Embedded Systems for Health: Introductory module High Energy Performance Communications OR System Architecture and Modeling Smart System for Personalized Blood Glucose Control	ST63 2SC6300 2SC6210 or 2SC6310 2SC6390	5 0 2,5 2,5	Rennes	F & E
<input type="checkbox"/>	<input type="checkbox"/>	Modélisation et développement de logiciels de supervision : Intro: module contexte et enjeu Modèles de données et schémas de conception Développement d'un système de supervision de capteurs	Modeling and Development of Supervision Software: Introductory module Data Models and Design Schemas Development of a Sensor Monitoring System	ST64 2SC6400 2SC6410 2SC6490	5 0 2,5 2,5	Rennes	F

COURS DE TRONC COMMON / COMMON CORE COURSES

Choices		FR Course title	Eng Course title	Course code	ECTS	Campus	Language of Instruction
<input type="checkbox"/> E	<input type="checkbox"/> F	Commande des systèmes dynamiques	Control Theory	2CC1000	2,5	all	E or F in P-Saclay and Rennes, F in Metz

SEQUENCE GENERALE "SG6" / ACADEMIC TERM

ELECTIVE SERIES 2.1

Choice 1	Choice 2	FR Course title	Eng Course title	Course Code	ECTS	Campus	Language of Instruction
<input type="checkbox"/>	<input type="checkbox"/>	Systèmes Dynamiques en Neurosciences	Dynamical Systems in Neurosciences	2EL1110	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Conversion d'énergie	Energy Conversion	2EL1320	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Mécanique des Fluides	Fluid Mechanics	2EL1420	2,5	Paris Saclay	F or E
<input type="checkbox"/>	<input type="checkbox"/>	Distribution et opérateurs	Distributions and Operators	2EL1720	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Construire demain - La mécanique appliquée au génie civil	Advanced Mechanics for Civil Engineering: Building Tomorrow	2EL1840	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Compréhension, optimisation et simulation des procédés biotechnologiques	Understanding, Optimisation and Simulation of Biotechnological Processes	2EL2010	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Economie de l'innovation et de la croissance	Economics of Growth and Innovation	2EL2170	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Capteurs intégrés MEMS	Integrated MEMS Sensors	2EL2530	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Réseaux de communication mobiles et services	Mobile Communication Networks and Services	2EL2620	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Conception de systèmes électroniques complexes: du composant au système hétérogène	Design of Complex Electronic Systems: Form Component to Heterogenous System	2EL5090	2,5	Metz	F
<input type="checkbox"/>	<input type="checkbox"/>	Traitement de l'image	Image Processing	2EL5070	2,5	Metz	F
<input type="checkbox"/>	<input type="checkbox"/>	La lumière pour comprendre la matière	Light to Understand Matter	2EL5110	2,5	Metz	E
<input type="checkbox"/>	<input type="checkbox"/>	Architecture des ordinateurs	Computer Architecture	2EL6020	2,5	Rennes	E
<input type="checkbox"/>	<input type="checkbox"/>	Modélica et bond graph: modélisation multi-domaine, analyse et simulation	Modelica and Bond Graph: Multi-domain Modeling, Analysis and Simulation	2EL6050	2,5	Rennes	E
<input type="checkbox"/>	<input type="checkbox"/>	Géopolitique des ressources et des objets	Geopolitics of Resources and Objects	2EL6210	2,5	Rennes	F

ELECTIVE SERIES 2.2

Choice 1	Choice 2	FR Course title	Eng Course title	Course Code	ECTS	Campus	Language of Instruction
<input type="checkbox"/>	<input type="checkbox"/>	Systèmes de navigation et optroniques pour véhicules autonomes et satellites - Technologies temps réel		2EL1240	2,5	Paris-Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Transferts thermiques	Heat transfer	2EL1410	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Génie logiciel orienté objet	Object Oriented Programming	2EL1520	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Modèles et systèmes pour la gestion de données massives	Models and Systems for Big Data Management	2EL1560	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Machine learning	Machine Learning	2EL1730	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Dynamique des structures et acoustique	Structural Dynamics and Acoustics	2EL1810	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Physique quantique et statistique avancée	Advanced Quantum and Statistical Physics	2EL1920	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Finance et droit de l'entreprise	Corporate Finance and Law	2EL2150	2,5	Paris Saclay	E + 1 lecture in F
<input type="checkbox"/>	<input type="checkbox"/>	Théorie des Organisations et des marchés	Organisational and Market Theories	2EL2220	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Analyse et traitement de données audio (parole et musique)	Analysis and Processing of Audio Data (Speech and Music)	2EL5060	2,5	Metz	E
<input type="checkbox"/>	<input type="checkbox"/>	Modélisation pour l'ingénierie des systèmes	Modeling for Systems Engineering	2EL5140	2,5	Metz	F
<input type="checkbox"/>	<input type="checkbox"/>	Transitions et symbiose socio-économique	Transitions and socio-economic symbiosis	2EL5150	2,5	Metz	F

<input type="checkbox"/>	<input type="checkbox"/>	Conception de systèmes embarqués critiques de contrôle commande	Model based Design of Critical Embedded Control Systems	2EL6010	2,5	Rennes	E
<input type="checkbox"/>	<input type="checkbox"/>	Réseaux informatiques avancés	Advanced Computer Networking	2EL6110	2,5	Rennes	F
<input type="checkbox"/>	<input type="checkbox"/>	Méthodes bayésiennes pour l'apprentissage automatique	Bayesian Methods for Machine Learning	2EL6190	2,5	Rennes	E
ELECTIVE SERIES 2.3							
Choice 1	Choice 2	FR Course title	Eng Course title	Course Code	ECTS	Campus	Language of Instruction
<input type="checkbox"/>	<input type="checkbox"/>	Exposition des personnes à l'électromagnétisme et compatibilité électromagnétique	Exposure of People to Electromagnetism and Electromagnetism Compatibility	2EL1210	2,5	Paris-Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Systèmes spatiaux embarqués	Embedded Space Systems	2EL1230	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Modélisation et simulation numérique des milieux réactifs	Modeling and Numerical Simulation of Reactive Media	2EL1440	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Calcul haute performance	High Performance Computing	2EL1550	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Probabilités avancées	Advanced Probabilities	2EL1710	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Comportement non-linéaire des matériaux	Non-Linear Behavior of Materials	2EL1830	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Génomique et biologie synthétique en biotechnologie sanitaire et industrielle	Genomics and Synthetic Biology in Health and Industrial Biotechnology	2EL2030	2,5	Paris Saclay	E
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Science de la conception	Design Science	2EL2120	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Stratégie, Marketing et Organisation	Strategy, Marketing and Organisation	2EL2140	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Compression et débruitage des signaux	Signal Compression and Denoising	2EL2410	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Architecture et conception des systèmes numériques	Architecture and Design of Digital Systems	2EL2510	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Théorie des communications	Communications Theory	2EL2610	2,5	Paris Saclay	E
<input type="checkbox"/>	<input type="checkbox"/>	Introduction à l'ingénierie des applications mobiles	Introduction to Mobile Applications Engineering	2EL5010	2,5	Metz	F
<input type="checkbox"/>	<input type="checkbox"/>	Méthodes d'estimations et introduction à la théorie moderne du codage	Estimation Methods and Introduction to the Modern Coding Theory	2EL5050	2,5	Metz	F
<input type="checkbox"/>	<input type="checkbox"/>	Intelligence artificielle et deep learning	Artificial Intelligence and Deep Learning	2EL6090	2,5	Rennes	E
<input type="checkbox"/>	<input type="checkbox"/>	Communication Systems Engineering	Communication Systems Engineering	2EL6100	2,5	Rennes	E
<input type="checkbox"/>	<input type="checkbox"/>	Marketing Digital	Digital Marketing	2EL6180	2,5	Rennes	F

ENSEIGNEMENTS HORS SEQUENCE / SEMESTER-LONG COURSES							
Multiple choices possible		FR Course title	Eng Course title	Course code	ECTS	Campus	Language of Instruction
<input type="checkbox"/> E	<input type="checkbox"/> F	Economie	Economics	2SL1000	2	all	E or F in P-Saclay, F in Metz and Rennes
<input type="checkbox"/> E	<input type="checkbox"/> F	Science du Climat et enjeux du changement climatique	Climate Science and Climate Change Issues	2SL1100	1	all	E or F in P-Saclay and Rennes, F in Metz
<input type="checkbox"/>		Droit	Law	2SL2000	1	all	E
<input type="checkbox"/>		Sociologie des Organisations	Sociology of Organizations	2SL4000	1	all	F
<input type="checkbox"/>		Ateliers Pratiques Ingénieur - API	Engineering Skills Workshops	2SL5000	1	all	F
<input type="checkbox"/>		Ateliers Pratique Professionnelle - APP	Professional Practice Workshops	2SL7000	0,5	all	F
<input type="checkbox"/>		Projet S7* (voir listes des pôles projets p.9)	S7 Project* (list of project clusters on p.9)	2SL8000	4	all	F/E depending on topic or team

INTENSIVE SEMINAR COURSES							
Choice	FR Course title		Eng Course title	Course code	ECTS	Campus	Language of Instruction
<input type="checkbox"/>	Jeux d' Entreprise		Business Games	2IN4000	2	all	F
Choice 1	Choice 2	FR Course title	Eng Course title	Course code	ECTS	Campus	Language of Instruction
<input type="checkbox"/>	<input type="checkbox"/>	Cours de type Sciences Humaines et Sociales (SHS) dans l'un de ces 4 domaines: Individus, Travail, Organisations; Enjeux de société; Science, Technologie, Société* ou Innovation, Arts et Créativité*	Humanities and Social Sciences (SHS) course, in one of the following domains: Individuals, Work, Organisations; Perspective on Key Social Issues; Science, Technology, Society* or Innovation, Arts and Creativity*	2IN2310, 2IN2320, 2IN2330, 2IN2340	1,5	Paris Saclay, Rennes, Metz	F or E depending on course
<input type="checkbox"/>	<input type="checkbox"/>	Comprendre la blockchain	Understanding Blockchain	2IN1510	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Intelligence artificielle et santé mondiale	Artificial intelligence and global health	2IN1580	2,5	all	E
<input type="checkbox"/>	<input type="checkbox"/>	Design your way	Design your way	2IN1600 (formerly 2EL2710)	2,5	Paris Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Communiquer sur des projets de recherche durable	Communicate on Sustainable Research Projects	2IN2100	2,5	Paris-Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Bridge Building Challenge	Bridge Building Challenge	2IN5010	2,5	Paris-Saclay	F/E possible
<input type="checkbox"/>	<input type="checkbox"/>	Innovation des semi-conducteurs	Semiconductor Innovation	2IN5020	2,5	Paris-Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Travail expérimental de physique	Experimental Physics Work	2IN5030	2,5	Paris-Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Découverte de la radio logicielle	Discovery of Software Defined Radio	2IN5050	2,5	Paris-Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Traitement du signal audio	Audio Signal Processing	2IN5060	2,5	Paris-Saclay	E on request
<input type="checkbox"/>	<input type="checkbox"/>	Ethique et responsabilité	Ethics and Responsibility	2IN5110	2,5	Paris-Saclay	E on request
<input type="checkbox"/>	<input type="checkbox"/>	Immersion dans les biomatériaux	Immersion week in biomaterials	2IN5070	2,5	Pomacle (Reims)	E/F
<input type="checkbox"/>	<input type="checkbox"/>	Physique des décharges électriques (plasmas froids)		2IN5080	2,5	Paris-Saclay	F
<input type="checkbox"/>	<input type="checkbox"/>	Le marketing et ses outils: vers un marketing responsable ?	Marketing and its Tools: Towards Responsible Marketing?	2IN5106	2,5	Metz	F

* seuls ces domaines sont proposés à Rennes

* only these domains are offered in Rennes

LANGUAGE COURSES						
Choices (max. 2)	FR Course title	Eng Course title	Course code	ECTS	Campus	Language of Instruction
<input type="checkbox"/>	Anglais	English	2LC0100	1,5	all	F
<input type="checkbox"/>	Français Langue Etrangère - FLE	French as a foreign language	2LC0200	1,5	all	F
<input type="checkbox"/>	Allemand	German	2LC0300	1,5	all	F
<input type="checkbox"/>	Espagnol	Spanish	2LC0400	1,5	all	F
<input type="checkbox"/>	Italien	Italian	2LC0500	1,5	all	F
<input type="checkbox"/>	Portugais	Portuguese	2LC0600	1,5	Paris-Saclay	F
<input type="checkbox"/>	Chinois	Chinese	2LC7000	1,5	all	F
<input type="checkbox"/>	Japonais	Japanese	2LC0800	1,5	all	F
<input type="checkbox"/>	Russe	Russian	2LC0900	1,5	P-S, Metz, Rennes	F
<input type="checkbox"/>	Arabe	Arabic	2LC1000	1,5	P-S, Rennes (online)	F
<input type="checkbox"/>	Langue des Signes Français	French Sign Language	2LC1100	1,5	P-Saclay	F
<input type="checkbox"/>	Hébreu	Hebrew	2LC1200	1,5	P-Saclay	F
<input type="checkbox"/>	Ukrainien	Ukrainian	2LC1201	1,5	P-Saclay	F

ECTS TOTAL:

* List of S7 Project clusters (in French *Pôles Projets*): If interested in this project, you will be asked to rank these topics **after your admission and before your arrival**. (Assignment to a specific cluster will depend on requests and available spots)

N°				Remarks	Campus	
P02		City Faber Lab	City Faber Lab		Paris-Saclay	Language by default is French. However, it will be possible to use English in your group unless specified otherwise.
P03		CubeSats	CubeSats		Paris-Saclay	
P04		Data Science	Data Science		Paris-Saclay	
P05		Formation à la Recherche	Training for Research	Mathematics or Physics training required	Paris-Saclay	
P07		Ingénierie pour l'Environnement	Environmental Engineering		Paris-Saclay	
P09		Innovations Pédagogiques et Edtech	Pedagogical Innovations and Edtech		Paris-Saclay	
P10		Intelligence Artificielle	Artificial Intelligence		Paris-Saclay	
P11		IoT - Internet of Things	IoT - Internet of Things		Paris-Saclay	
P12		Makers	Makers		Paris-Saclay	
P13		Maîtrise des Systèmes Énergétiques	Power System Control		Paris-Saclay	
P14		MédiaScience	MediaScience		Metz	
P15		Modélisation Mathématique des Systèmes Complexes	Mathematical Modelling of Complex Systems		Paris-Saclay	
P16		Mutations Économiques Agiles et Responsables	Economic Changes		Paris-Saclay	
P17		Nouveaux Concepts Énergétiques	New Concepts Energy		Paris-Saclay	
P18		Production, Supply Chain et Opérations	Production, Supply Chain and Operations	Held in French	Paris-Saclay	
P19		Robotique	Robotic Systems in Interaction		Paris-Saclay	
P20		Biotechnologies et Santé	Biotechnology and Health	Biology training required	Paris-Saclay	
P21		Smart and Secure Life	Smart and Secure Life		Rennes	
P22		Systèmes Cyber-Physiques	Cyberphysical Systems		Paris-Saclay	
P23		Tech for Good and Design Thinking	Tech for Good and Design Thinking		Paris-Saclay	
P24		Transition Écologique et Solidaire	Ecological and Inclusive Transition	Biology training required, held in French	Paris-Saclay	
P25		Véhicules Intelligents	Autonomous Vehicles		Paris-Saclay	