

EXCHANGE PROGRAM 2024-25: FALL SEMESTER “S7”

This document presents 4 pre-defined tracks: Computer Engineering, Electrical/ICT Engineering, Mechanical Engineering, and Industrial Engineering.

The courses offered in these tracks are similar to those in the main list/catalog. They are organized by engineering field. This structure can be helpful if you're unsure about which courses to choose.

🔗 You can download the relevant syllabus by clicking on each course.

COMPUTER ENGINEERING TRACK - With lectures in French (FALL SEMESTER)			
PERIOD	CODE	COURSE TITLE	ECTS
Early September (one week)	2IN4000	Jeux d'Entreprise - F (optional)	2
	OR 2SL1100	OR Climate Science and Climate Change Issues - E (optional)	OR 1
September to mid-November	2CC1000	Control Theory - F or E	2.5
	ST 58	Engineering Challenge Term - <u>Systèmes complexes industriels et critiques à logiciels prépondérants</u> : F	0
	2SC5800	Context and Issues module	
	2SC5810	Conception et vérification de systèmes critiques	
	2SC5894	One-week intensive project: Automatisation de la conception de la signalisation : de la spécification au code embarqué	
	OR	OR	OR
	ST53	Engineering Challenge Term – <u>Véhicule autonome et connecté</u> : F	0
	2SC5300	Context and Issues module	
	2SC5310	Architecture et technologie du véhicule autonome	
	2SC5390	One-week intensive project: Conception d'un système de livraison urbaine « dernier kilomètre » par véhicules autonomes et connectés	
2SL1000	Economics - F or E (optional)	2	
2SL2000	Law - F (optional)	1	
One week in November	2IN5050	Radio logicielle : décodage RF, brouillage et contremesure - E on request	2.5
Mid-November to January	2EL2620	Réseaux de communication mobiles et services - F	2.5
	2EL1520	Génie logiciel orienté objet - F	2.5
	OR	OR	
	2EL1560	Modèles et systèmes pour la gestion de données massives - F	
	OR	OR	
2EL1730	Machine Learning - E		
2EL1550	Calcul haute performance - F	2.5	
OR	OR		
2EL2510	Architecture et conception des systèmes numériques - F		

	2SL4000	Sociologie des Organisations - F (<i>optional</i>)	1
During the whole semester	2SL8000	Project and Soft skills development workshops: F/E Team project (1 d/wk throughout semester)	4
	+	+	+
	2SL5007	Engineering Skills Workshops	1
	+	+	+
	2SL7007	Professional Practice Workshops	0.5
	LC0200	French as a Foreign Language + another foreign language class (<i>optional</i>)	1.5 + 1.5

Total: 25 to 32 ECTS depending on choices.

**ELECTRICAL ENGINEERING / ICT TRACK - With lectures in French
(FALL SEMESTER)**

PERIOD	CODE	COURSE TITLE	ECTS
Early September (one week)	2SL1100	Climate Science and Climate Change Issues - E (<i>optional</i>)	1
September to mid-November	2CC1000	Control Theory - F or E	2.5
	ST 53	Engineering Challenge Term - Véhicule intelligent et communicant : F	0
	2SC5300	Context and Issues module	
	2SC5310	Architecture et technologies pour le véhicule intelligent et communicant	
	2SC5390	One-week intensive project: Conception d'un système de livraison urbaine « dernier kilomètre » par véhicules autonomes et connectés	2.5
	2SL1000	Economics - F or E (<i>optional</i>)	2
	2SL2000	Law - F (<i>optional</i>)	1
One week in November	2IN5020 OR 2IN5060 OR 2IN5050	Innovation des semi-conducteurs - F OR Audio Signal Processing - E OR Radio logicielle: décodage RF, brouillage et contremesure - E on request	2.5
Mid-November to January	2EL2620 OR 2EL2530	Réseaux de communication mobiles et services - F OR Integrated MEMS Sensors - E	2.5
	2EL1520 OR 2EL1730	Génie logiciel orienté objet - F OR Machine Learning - E	2.5
	2EL2410 OR 2EL2610 OR 2EL2510	Compression et débruitage des signaux - F OR Communications Theory - E OR Architecture et conception des systèmes numériques - F	2.5
	2SL4000	Sociologie des Organisations - F (<i>optional</i>)	1
	During the whole semester	2SL8000 +	Project and Soft skills development workshops: F/E Team project (1 d/wk throughout semester)
2SL5007 +		Engineering Skills Workshops	1
2SL7007		Professional Practice Workshops	0.5
LC0200		French as a Foreign Language + another foreign language class (<i>optional</i>)	1.5 + 1.5

Total: 24,5 to 31 ECTS depending on choices.

**MECHANICAL ENGINEERING TRACK - With lectures in French
(FALL SEMESTER)**

PERIOD	CODE	COURSE TITLE	ECTS
Early September (one week)	2IN4000	Jeux d'Entreprise - F (<i>optional</i>)	2
	OR 2SL1100	OR Climate Science and Climate Change Issues - E (<i>optional</i>)	OR 1
September to mid-November	2CC1000	Control Theory - F or E	2.5
	ST 56	Engineering Challenge Term - Systèmes multi-énergies : F	
	2SC5600	Context and Issues module	0
	2SC5610	Conversion et régulation d'énergie	2.5
	2SC5692	One-week intensive project: Groupe motopropulseur hybride	
	OR 2SC5693	OR Propulsion aéronautique hybride (choice to be made upon arrival)	2.5
	2SL1000	Economics - F or E (<i>optional</i>)	2
2SL2000	Law - E (<i>optional</i>)	1	
One week in November	2IN5010	Bridge Building Challenge - F	2.5
Mid-November to January	2EL1420	Mécanique des fluides - F or E	
	OR 2EL1840	OR Construire demain: la mécanique appliquée au génie civil - F	2.5
	OR 2EL2530	OR Integrated MEMS Sensors - E	
	2EL1810	Structural Dynamics and Acoustics - E	2.5
	OR 2EL1410	OR Heat Transfer -E	
2EL1830	Non-Linear Behaviour of Materials - E	2.5	
During the whole semester	2SL8000	Project and Soft skills development workshops: F/E Team project (1 d/wk throughout semester)	4
	+	+	+
	2SL5007	Engineering Skills Workshops	1
	+	+	+
2SL7007	Professional Practice Workshops	0.5	
LC0200	French as a Foreign Language + another foreign language class (<i>optional</i>)	1.5 + 1.5	

Total: 24,5 to 31 ECTS depending on choices.

**INDUSTRIAL ENGINEERING TRACK - With lectures in French
(FALL SEMESTER)**

PERIOD	CODE	COURSE TITLE	ECTS
Early September (one week)	2IN4000	Jeux d'Entreprise - F (optional)	2
	OR 2SL1100	OR Climate Science and Climate Change Issues - E (optional)	OR 1
September to mid-November	2CC1000	Control Theory - F or E	2.5
	ST 58	Engineering Challenge Term - Systèmes complexes industriels et critiques à logiciels prépondérants : F	
	2SC5800	Context and Issues module	0
	2SC5810	Conception et vérification de systèmes critiques	2.5
	2SC5894	One-week intensive project: Automatisation de la conception de la signalisation : de la spécification au code embarqué	2.5
	2SL1000	Economics - F or E (optional)	2
	2SL2000	Law - F (optional)	1
One week in November	2IN23XX	Humanities and Social Sciences course (« SHS”) – F/E depending on topic (topic to be chosen on site)	1.5
Mid-November to January	2EL2170	Economie de l'innovation et de la croissance - F	
	OR 2EL2010	OR Understanding, Optimization and Simulation of Biotechnological Processes - E	2.5
	2EL2220	Théorie des Organisations et des marchés - F	
	OR 2EL2150	OR Corporate Finance and Law - E	2.5
	2EL2140	Stratégie, Marketing et Organisation - F	2.5
	2SL4000	Sociologie des organisations - F	1
During the whole semester	2SL8000	Project and Soft skills development workshops: F/E Team project (1 d/wk throughout semester)	4
	+	+	+
	2SL5007	Engineering Skills Workshops	1
	+	+	+
	2SL7007	Professional Practice Workshops	0.5
	LC0200	French as a Foreign Language + another foreign language class (optional)	1.5 + 1.5

Total: 25.5 to 31 ECTS depending on choices.