

EXCHANGE PROGRAM 2023-24: FALL SEMESTER “S7”

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

The courses listed within these tracks are the same as those from the main course list. The only difference is that they are arranged according to specific engineering fields, which can be helpful if you're not sure 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 (<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 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		2.5
	2SC5894	One-week intensive project: Systèmes de production pour usines intelligentes		2.5
	2SL1000	Economics - F or E (<i>optional</i>)	2	
2SL2000	Law - E (<i>optional</i>)	1		
One week in November	2IN1580	Artificial Intelligence and Global Health - E	2.5	
	OR 2IN5050	OR Discovery of Software Defined Radio - E on request		
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 2EL2510	OR 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	
2LC0200	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	2.5
	2SC5310	Architecture et technologies pour le véhicule intelligent et communicant	2.5
	2SC5390	One-week intensive project: Livraison urbaine par véhicules autonomes et connectés	2.5
	2SL1000	Economics - F or E (<i>optional</i>)	2
	2SL2000	Law - E (<i>optional</i>)	1
One week in November	2IN5020 OR 2IN5060 OR 2IN5050	Innovation des semi-conducteurs - F OR Audio Signal Processing - E OR Discovery of Software Defined Radio - 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
	2SL8000 + 2SL5007 + 2SL7007	Project and Soft skills development workshops: F/E Team project (1 d/wk throughout semester) + Engineering Skills Workshops + Professional Practice Workshops	4 + 1 + 0.5
	2LC0200 + another foreign language class (<i>optional</i>)	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	Introduction à la production d'énergie	
	2SC5692	One-week intensive project: Groupe motopropulseur hybride	2.5
	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	
	OR 2EL1410	OR Heat Transfer -E	2.5
	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
	2LC0200	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: Systèmes de production pour usines intelligentes	2.5
	2SL1000	Economics - F or E (optional)	2
	2SL2000	Law - E (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
	2LC0200	French as a Foreign Language + another foreign language class (optional)	1.5 + 1.5

Total: 25.5 to 31 ECTS depending on choices.