



ESME School of Engineering

Undergraduate Program

Courses available for exchange students – Undergraduate Level

Paris	Lille	Lyon
		
Engineering Sciences Undergraduate program	Engineering Sciences Undergraduate program	Engineering Sciences Undergraduate program

Please note that all classes below are available in the 3 campuses



ESME School of engineering

Paris-Center Campus

Courses available for exchange students – Undergraduate Level

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ESME School of engineering

Paris-Center Campus

Courses available for exchange students – Undergraduate Level

Undergraduate Program – Creative Engineering Workshops – Fall Semester (September – January)

TEACHING UNIT	COURSE DESCRIPTION	AIMS	HOURS	SCHEDULE	ECTS CREDITS
Alternative Controllers	Design, test and fabricate new ways to play your favourite games! Using standout projects of the AltCtrl movement for inspiration, student teams will learn and use a wide range of digital design and fabrication skills and tools, as well as electronic sensors, actuators and control systems. Their goal: make a completely new way to play an existing game, or even design and make their own! You will learn to think outside the box, break the box down, reassemble it, and connect it to control modules for an innovative play experience.	The final boss battle is a showcase, where other students and industry professionals come and play with your device. Players need to have fun with your prototype, and it needs to survive!	25 to 30 hrs	Tuesday morning	10
Interactive Design Experience	Design and make an interactive project, based around wireless IoT technology. This workshop is designed to be accessible to first-time makers. The only hard constraint for your project is ambition. Want to create a laser and sensor-based mini escape game? An interactive story machine? An automated drink mixer? It's up to you to choose your	We encourage the use of advanced electronics, such as Raspberry Pi , printed circuit board and wireless open source solutions to make remotely controlled devices. The final	25 to 30 hrs	Thursday morning	10



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	<p>focus. Electronics, sensor arrays, digital design and/or fabrication, biodesign, among many others, of course. We help you assemble - and provide you with - a customised learning program to suit your team's needs.</p>	<p>showcase will involve and external visitors to impress with the results of your creative engineering work!</p>			
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Undergraduate Program – Year 1 – Fall Semester (September – January)

TEACHING UNIT	COURSE	HOURS	ECTS CREDITS
UE 1 - Fund. Sciences for Engineers	Fundamental Math	27 hrs	6
UE 1 - Fund. Sciences for Engineers	Applied Math	27 hrs	6
UE 1 - Fund. Sciences for Engineers	Electrokinetics	47 hrs	10
UE 2 - Sciences for Energy & Climate	Technical Systems	26 hrs	5
UE 2 - Sciences for Energy & Climate	Point Mechanics	30 hrs	6
UE 2 - Sciences for Energy & Climate	Living Systems	12 hrs	2
UE 2 - Sciences for Energy & Climate	Science & Society	10,5 hrs	2
UE 3: Languages & Tech for Engineers	Python Language	18 hrs	3
UE 3: Languages & Tech for Engineers	English Language	13,5 hrs	5
UE 4: Perso. & Pro. Projects	Introduction to Business Economics	15 hrs	3



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Undergraduate Program – Year 2 – Fall Semester (September – January)

TEACHING UNIT	COURSE	HOURS	ECTS CREDITS
UE 1 - Fund. Sciences for Engineers	Fundamental Math	39 hrs	8
UE 1 - Fund. Sciences for Engineers	Applied Math	39 hrs	8
UE 1 - Fund. Sciences for Engineers	Introduction to Digital Analysis	24 hrs	5
UE 1 - Fund. Sciences for Engineers	Signals & Systems	47 hrs	10
UE 2 - Sciences for Energy & Climate	Technical Systems	26 hrs	5
UE 2 - Sciences for Energy & Climate	Project Management: SMART Objectives	10,5 hrs	2
UE 3: Languages & Tech for Engineers	Analog Electronics	24 hrs	5
UE 3: Languages & Tech for Engineers	English Language	18 hrs	5
UE 4: Perso. & Pro. Projects	Personal Development	10,5 hrs	2
UE 4: Perso. & Pro. Projects	Business Strategy	18 hrs	4



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<!-- Year 3 classes are only available in our South Parisian Campus – 38 rue Molière, 94200 Ivry-sur-Seine

Undergraduate Program – Year 3 – Fall Semester (September – January)

TEACHING UNIT	COURSE	HOURS	ECTS CREDITS
UE 1	Electronics	24 hrs	5
UE 1	Linear Systems	24 hrs	5
UE 1	UNIX	24 hrs	5
UE2	Statistics and Probabilities	24 hrs	5
UE2	Signal Processing	24 hrs	5
UE2	Energy	24 hrs	5
UE2	Network Overview	24 hrs	5
UE3	Project Inspire	24 hrs	5