

List of recommended courses from other programs (12 credits max. with Specialization "Materials research and development" / 6 credits max. with Minor)									
Code	Courses	Lecturers	Programs	Semesters			Credits	Exams	
				Fall	Spring				
				c	e	p	c	e	p
CH-421	Catalysis for energy storage	Hu Xile	CGC	2			2		written
CH-426	Artificial photosynthesis	Zakeeruddin	CGC	2			2		oral
ChE-201	Introduction to chemical engineering	Harzmannkatis	CGC	2	J		3		written
ChE-205	Introduction au génie chimique et à l'énergie TP	Boussont	CGC	2			2		during semester
ChE-402	Diffusion and mass transfer	Agarwal	CGC	2	J		4		written
ChE-403	Heterogeneous reaction engineering	Resken	CGC	2	J		4		written
ChE-436	Pharmaceutical biotechnology	Pick	GC	2	J		3		written
CVIL-321	Modélisation numérique des solides et structures	Mohamri/Anciaux	GC			2	2		written
CVIL-331	Dimensionnement des structures en bois	Natterer Jo.	GC	2	J		3		written
CVIL-411	Dam engineering	Mamo/Monwet	GC	2	J		3		oral
CVIL-443	Advanced composites in engineering structures	Vasilopoulos	GC	2	J		3		oral
CVIL-454	Infrastructures de transport II	Tille	GC			2	J		written
CVIL-510	Quantitative imaging for civil engineering	Ando	GC	2	J		3		during semester
CVIL-532	Matériaux et structures	Demaré	GC	2	J		3		oral
EE-535	Nanoelectronics	Tomasa	EL	2			2		written
EE-536	Physical models for micro and nanosystems	Kis	EL	2			2		during semester
EE-585	Space mission design and operations	Nicollier	EL			2			oral
ENG-410	Energy supply, economics and transition	Binder/Thalmann/Ballif	SIE/AR/MT			2			written
ENG-433	Chimie des déchets alimentaires	Richard	CGC	2			2		written
ENG-435	Chemistry of food processes	Blaiz	CGC			2			written
ENG-445	Energy and comfort in buildings	Sorbu/Licina	GC	2	J		3		during semester
ENV-230	Fundamentals in ecology	Batin/Crossard	SIE			3	J	J	written
ENV-406	Biomimeticization: from nature to application	Adams/Melhorn	SIE	2	J		4		during semester
ENV-409	Air pollution	Falahama/Bietmann	SIE			2	J		written
ENV-470	Desalination energy (for ME)	Mahdihaji/Schönenberger	SIE			2	J		during semester*
ENV-500	Solid waste engineering	Ludwig	SIE	2	J		4		during semester
ENV-501	Material and energy flow analysis	Hecher/Binder/Moreau	SIE	2	J		4		during semester
ENV-525	Physics and hydrology of snow	Hawald/Lehning	SIE	2	J		4		written
ME-312	Précédés de production	Bothe E.	GM			4			written
ME-331	Solid mechanics	vacat	GM			3	J	J	written
ME-332	Mécanique vibratoire	Villanueva	GM	J	J		4		written
ME-342	Introduction aux turbomachines	Farhat	GM			2			written
ME-372	Méthode des éléments finis	Gallare	GM	2	J		3		written
ME-409	Energy conversion and renewable energy	Marchal/Nguyen	GM	2	J		4		written
ME-413	Introduction to additive manufacturing	Bohler/Brueger/Moser	GM	2	J		3		written
ME-419	Production management	Kabaji	GM	2		2			during semester*
ME-426	Micro/Nanomechanical devices	Villanueva	GM	2	J		4		oral
ME-451	Advanced energetics	Maréchal	GM	2	J		5		oral
ME-460	Renewable energy (for ME)	Franzoner/Van Herle	GM			2	J		written
ME-474	Numerical flow simulation	Bosjo	GM	2	J		5		during semester*
ME-481	Biomechanics of the cardiovascular system	Stergopoulos	GM			2	J		written
ME-516	Lifecycle performance of product systems	Friot	GM			2	J		during semester*
MICRO-534	Advanced MEMS & microsystems	Bisnol	MT			3			oral
MICRO-312	Physique des composants semi-conducteurs	Besse	MT	2			3		oral
MICRO-330	Capteurs	Shea/Bosro	MT			5			written
MICRO-331	Microfabrication technologies	Gijs/Brugger J.	MT	J			4		oral
MICRO-420	Selected topics in advanced optics	Martin	MT	2			3		oral
MICRO-448	Manufacturing systems and supply chain dynamics	Pilliger/Galley	MT			2	J		oral
MICRO-470	Scaling laws & simulations in micro & nanosystems	Shea	MT	2			2		oral
MICRO-431	Materials & Technology of microfabrication	Gijs/Lehmert	MT	2	J		3		oral
MICRO-520	Laser microprocessing	Hoffmann	MT			2			oral
MICRO-523	Optical detection	Besse P.-A.	MT	2			3		oral
MICRO-561	Biointerfacing I	Altug	SV	3			3		written
MICRO-562	Biointerfacing II	Altug + Seitz	SV			J	J	2	during semester
MICRO-565	Fundamentals and processes for photovoltaic devices	Ballif	MT			2	J		written
MICRO-566	Large-area electronics: devices and materials	Ballif/Haug/Würsch	MT			2	J		oral
PHYS-301	Bioinformatics - physics of the cell	Manley	PH	2	J		3		written
PHYS-317	Optique I	Dwiz	PH	2	J		3		oral
PHYS-403	Computer simulation of physical systems I	Pasquarello	PH	2	J		4		oral
PHYS-405	Experimental methods in physics	Dwiz/Cantoni	PH/MX	2	J		3		oral
PHYS-433	Semiconductor physics and light-matter interaction	Batte	PH	2	J		4		written
PHYS-445	Nuclear fusion and plasma physics	Fasoli	PH	2	J		4		oral
PHYS-501	Nonlinear optics	Roke	PH	2	J		4		written

\* no withdrawal