

SCHOOL'S CHART OF COURSES



School's chart of courses

Foundation Year 1 | Semester 1



Foundation Year 1 Semester 1														
TU	Teaching Unit	TUCE	TU Constitutif Elements Module	Semestrial Time Table Load					Credits		Coefficients		Examination Regime	
				TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-Term, quizzes and Final Exam
111	Mathematics	1111	Calculus 1	56	28	28	0	0	4	8	4	8		X
		1112	Linear Algebra	56	28	28	0	0	4		4		X	
112	Physics	1121	Electricity and magnetism	48	20	14	14	0	2	4	2	4		X
		1122	Engineering Mechanics 1	48	20	14	14	0	2		2		X	
113	Chemistry	1131	General Chemistry	48	28	10	10	0	4	4	4	4		X
114	Computer science	1141	Alqorithmic and programming (Python) I	28	0	0	28	0	2	6	2	6	X	
		1142	ICDL (International Computer Driving License)	20	0	0	20	0	2		2		X	
		1143	Infomaton Technology Security (ITS) workshop	20	0	0	20	0	2		2			X
115	Humanities and Social Sciences	1151	Philosophy of Science	28	28	0	0	0	2	4	2	4		X
		1152	Economics and Finance for Engineers	28	28	0	0	0	2		2		X	
116	Languages	1161	French DELF Prof (A1, A2)	28	0	28	0	0	2	4	2		X	
		1162	English1	28	0	28	0	0	2		2		X	
Total				434	180	150	106	0	30	30	30	30		

School's chart of courses



Foundation Year 1 | Semester 2

Foundation Year 1 Semester 2														
			TU Constitutif Elements	Semestriell Time Table Load					Credits		Coefficients		Examination Regime	
TU	Teaching Unit	TUCE	Module	TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-Term, quizzes and Final Exam
121	Mathematics	1211	Calculus II	56	28	28	0	0	4	8	4	8		X
		1212	Probability and Statistics	56	28	28	0	0	4		4		X	
122	Physics	1221	Engineering Mechanics 2	42	20	12	10	0	2	6	2	6		X
		1222	Optical Engineering	42	20	12	10	0	2		2		X	
		1223	Engineering thermodynamics	32	20	12	0	0	2		2		X	
123	Chemistry	1231	Organic Chemistry	56	28	28	0	0	3	3	3	3		X
124	Computer science	1241	Algorithm and programming with Python II	28	0	0	28	0	2	4	2	2	X	
		1242	Supervised personal project (ICPL/Python)	28	0	0	28		2		2	2	X	
125	Humanities, and Social Sciences	1251	Sociology	28	28	0	0	0	3	3	3	3		X
126	Languages	1261	French DELF Pro (B1, B2)	28	0	28	0	0	3	6	3	6	X	
		1262	English 2	28	0	28	0	0	3		3		X	
Total				424	172	176	68	0	30	30	30	30		

School's chart of courses



Foundation Year 2 | Semester 3

Foundation Year 2 Semester 3														
TU	Teaching Unit	TUCE	TU Constitutif Elements Module	Semestriel		Time Table Load			Credits		Coefficients		Examination Regime	
				TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-Term, quives and Final Exam
211	Mathematics	2111	Applied mathematics	56	28	28	0	0	4	4	4	4		X
212	Engineering tool	2121	Geotechnical Engineering	42	20	12	10	0	2	4	2	4		X
		2122	Geographic infomation systems (GIS)	42	20	12	10	0	2		2			X
213	Chemistry	2131	Mineralogy and Petrology	40	20	0	20	0	4	4	4	4		X
214	Computer science	2141	Data mining	20	0	0	20	0	2	6	2	6	X	
		2142	Excel advanced skills	20	0	0	20	0	2		2		X	
		2143	Proqraminq C	28	0	0	28		2		2		X	
215	Humanities, and Social Sciences	2151	Environmental Sociology	28	28	0	0	0	3	6	3	6		X
		2152	Principles of Management	28	28	0	0	0	3		3			X
216	SOft Skills	2161	Infomation systems : Aqile Method	28	0	28	0	0	3	6	3	6	X	
		2162	Geotechnical	28	0	28	0	0	3		3		X	
Total				360	144	108	108	0	30	30	30	30		

Geomatic Engineering Second Year Semester 4														
			TU Constitutif Elements	Semestrial Time Table Load					Credits		Coefficients		Examination Regime	
TU	Teaching Unit	TUCE	Module	TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-Term, quizzes and Final Exam
221	Engineering tool	2211	Measurements and instrumentation	56	28	28	0	0	3	6	3	6		X
		2212	Signal Processing	42	14	0	28	14	3		3			X
222	Mathematics	2221	Stochastic process and queues	28	14	14	0	0	3	6	3	6		X
		2222	Numerical analysis	44	22	22	0	0	3		3			X
223	Computer science	2231	Introduction to Matlab	28	0	0	28	0	2	6	2	6	X	
		2232	Introduction to R for data analysis	28	0	0	28	0	2		2		X	
		2233	Programming project C	28	0	0	28	0	2		2		X	
224	Geography and History	2241	Geography	56	28	28	0	0	4	6	4	6		X
		2242	History	28	14	14	0	0	2		2			X
225	Humanities, and Social Sciences	2243	Legal Aspects in Environmental Sciences	28	0	28	28	0	3	6	3	6		X
		2251	English ESP 2	28	0	28	0	0	3		3		X	
Total				394	120	190	84	0	30	30	30	30		

Geomatic Engineering Third Year Semester 5														
			TU Constitutif Elements	Semestriell Time Table Load					Credits		Coefficients		Examination Regime	
TU	Teaching Unit	TUCE	Module	TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-Term, quizzes and Final Exam
311	Engineering Tool	3111	Sensors and acquisition	42	20	12	10	0	3	6	3	6		X
		3112	Remote sensing	42	20	0	22	0	3		3		X	
312	Geomatic planning and semiology	3121	Urban planning and management infrastructure	42	20	10	10	0	3	6	3	6	X	
		3122	Cartographic semiology	42	22	22	0	0	3		3			X
313	Software engineering	3131	Web and multimedia programming / webmapping	40	20	10	10	0	2	6	2	6		X
		3132	Object oriented programming	60	20	10	30	0	3		3			X
		3135	Programming project	20	0	0	20	0	1		1		X	
314	GeoDataBase	3141	Data Base (Langage & Modeling)	42	20	12	10	0	3	6	3	6		X
		3142	Modeling of geographical data base	42	20	12	10	0	3		3			X
315	Human Sciences and eadh sciences	3151	Ethnoecology and conservation	28	28	0	0	0	3	6	3	6		X
		3152	Socio-cultural Project (SCP)	28	0	28	0	0	3		3		X	
Total				428	190	116	122	0	30	30	30	30		

Geomatic Engineering Third Year Semester 6														
			TU Constitutif Elements	Semestriel Time Table Load					Credits		Coefficients		Examination Regime	
TU	Teaching Unit	TUCE	Module	TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-quizzes and Final Exam
321	Engineering Tool	3211	Operations Research Models in Engineering	40	20	20	0	0	3	6	3	6		X
		3212	image processing	40	20	0	20	0	3		3			X
322	Advanced and web Geomatics	3221	GeoWeb	42	20	10	12	0	3	6	3	6		X
		3222	Advanced Geomatics	42	21	21	0	0	3		3			X
323	Programming and project management	3231	Programming of GIS	42	20	0	22	0	2		2			X
		3232	Mobile programming	42	20	0	22	0	2	6		6		X
		3233	Agile project management	42	22	10	10	0	2		2			X
324	Humanities, and Social Sciences	3241	Social and Sustainable Innovation Driven by the Sustainable Development Goals	28	20	8	0	0	3	3	3	3		X
325	Soft skills	3251	Technical Communication	28	0	28	0	0	3		3		X	
		3252	English for Certification (TOEIC Basic)	28	0	28	0	0	3	6	3	6	X	
326	Project	3261	Capstone Prolect	28	0	28	0			3	3	3		X
Total				402	163	153	86	0	30	30	30	30		

Geomatic Engineering Fourth Year Semester 7

Geomatic Engineering Fourth Year Semester 7														
TU	Teaching Unit	TUCE	TU Constitutif Elements Module	Semestriell Time Table Load					Credits		Coefficients		Examination Regime	
				TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-Term, quizzes and Final Exam
411	Geographic Data Analysis	4111	Spatial Analysis	40	20	20	0	0	3	6	3	6		X
		4112	Multicriterion Analysis	40	20	20	0	0	3		3			X
412	Data Science	4121	Big Data and Cloud	48	20	20	8	0	3	6	3	6		X
		4122	Data Science	48	20	20	8	0	3		3			X
413	Data base & Software engineering	4131	Object-oriented analysis and design	48	20	20	8	0	2	6	2	6		X
		4132	Database design	48	20	20	8	0	2		2			X
		4133	Software engineering I	48	20	20	8	0	2		2			X
414	Languages	4141	French	28	0	28	0	0	3	6	3	6	X	
		4142	German 1 or Italian 1	28	0	28	0	0	3		3		X	
415	Business skills	4151	Management and Governance of Ecosystem Services	28	28	0	0	0	3	6	3	6		X
		4152	Environmental Entrepreneurship	28	28	0	0	0	3		3			X
Total				432	196	196	40	0	30	30	30	30		

Geomatic Engineering Fourth Year Semester 8														
TU	Teaching Unit	TUCE	TU Constitutif Elements	Semestriell Time Table Load					Credits		Coefficients		Examination Regime	
			Module	TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-Term, quizzes and Final Exam
421	Geomatic intelligence and sustainable development	4211	Geomatics and Sustainable Development	40	20	10	10	0	3	6	3	6		X
		4212	Geo Intelligence	40	20	20	0	0	3		3			X
422	3D Image processing	4221	Stochastic image modeling	40	20	10	10	0	3	6	3	6		X
		4222	3D imagery	40	20	10	10	0	3		3			X
423	Data base & Software engineering	4231	Database Management Systems	30	20	10	0	0	2	6	2	6		X
		4232	Software Engineering II	30	20	10	0	0	2		2			X
		4233	Design and development project	30	0	0	30	0	2		2		X	
424	Soft skills and languages	4241	Soft skills 1	28	0	28	0	0	2	6	2	6	X	
		4242	German 2 or Italian 2	28	0	28	0	0	2		2		X	
		4243	Business English	28	0	28	0	0	2		2		X	
425	Business skills	4251	Business intelligence	40	20	20	0	0	2	6	2	6		X
		4252	Design thinking	40	20	20	0	0	2		2			X
		4253	Project Management	28	0	28	0	0	2		2		X	
Total				412	160	222	60	0	30	30	30	30		

Geomatic Engineering Fifth Year Semester 9														
			TU Constitutif Elements	Semestriell Time Table Load					Credits		Coefficients		Examination Regime	
TU	Teaching Unit	TUCE	Module	TOT	L	T	Labs	IC	ECUE	TU	ECUE	TU	Continuous assessment	Mid-Term, quizzes and
511	AI	5111	Artificial Intelligence	40	20	10	10	0	3	6	3	6		X
		5112	Machine learning	42	20	10	12	0	3		3			X
512	Geomatic application, technology and research	5121	GIS Applications	60	20	20	20	0	2	6	2	6		X
		5122	Technological watch	30	20	10	0	0	2		2			X
		5123	Research on Geomatics	40	30	10	0	0	2		2			X
513	Data science	5131	Data mining	40	20	0	20	0	3	6	3	6		X
		5132	Data warehouse	40	20	0	20	0	3		3			X
514	Soft skills	5141	Writing and presentation techniques	28	0	28	0	0	3	6	3	6	X	
		5142	Soft skills 2	28	0	28	0	0	3		3		X	
515	Humanities, and Social Sciences	5151	Environmental Ethics and law	28	28	0	0	0	3	6	3	6		X
		5152	Corporate social responsibility (RSE)	28	28	0	0	0	3		3			X
Total				404	206	116	82	0	30	30	30	30		

Geomatic Engineering Fifth Year Semester 10

TU	Teaching Unit	TUCE	Module	Credits
521	Project	5211	<u>Final Year Project (FYP)</u>	30