

Water and Environmental Engineering Degree (Master of Science in Engineering)

Module Overview

Year 1 (Level Bachelor 3)						Year 2 (Level Master 1)						Year 3 (Level Master 2)				
Semester 5 - Autumn			Semester 6 - Spring			Semester 7 - Autumn			Semester 8 - Spring			Semester 9 - Autumn			Semester 10	
Code	Module	ECTS	Code	Module	ECTS	Code	Module	ECTS	Code	Module	ECTS	Code	Module	ECTS	Module	
CALC SCIEN	Higher Mathematics and Scientific Calculations	4	ECOV BIO	Life Sciences	2	GC1	Civil Engineering Level 1	3	Specialisation (Compulsory electives) 8 See detailed information on the next page			Specialisation (see detailed information on the next page) The students have to choose between the following specialisations: Hydrosystems (in English) 24 Water Treatment (in English) 24 Urban Hydraulics 24 Utility Management and Construction Sites 24 Ecology / Ecological engineering 24			Final Engineering Project 6 Months	
SOLVI BIO	Agronomy, Ecology and Microbiology	2	GENI PROC	Process Engineering	2	TREAU S1	Wastewater Treatment	3								
CHIM EAU	Water Chemistry	2	ECOJT	Contemporary ecology	1	TREAU C1	Drinking Water Treatment	4								
MECA FLU	Fluid and Continuum Mechanics	3	HF	HEC RAS Modelling, Solid Matter Transport	2	RESU2	Sewer Systems 2	4								
HYDRO LOG	Hydrology	2	RESP1	Drinking Water Networks 1	2	RESP2	Drinking Water Networks 2	4								
HYDRO GEO	Hydrogeology	3	RESU1	Sewer Systems 1	2	GC2 ou TRAME BLEU	Civil Engineering 2 or Water landscape connectivity	2	VOY AGE	Excursion	-	INGENINT	International Engineering	1		Final Engineering Project 6 Months
GEMINA	Public Management of the Environment and Stakeholders	3	HYDR	Pipe and Open Channel Hydraulics	4	ENVIS	Social Sciences of the Environment	2	DROIT	Environmental legislation	2	MANAG	Advanced Project Management (in English)	3		
MANA GING	Project Management and Sustainable Development	2	PRORIV	Multidisciplinary Project "River"	4	OR	Sustainable development	2	DECID AID	Financial Decision-Making in Engineering	1					
STATS	Statistics and DBMS	3	DON NEES	Data Analysis, CAD, GIS	2	METRO	Metrology	2								
COM1	Career Exploration and Preparation 1	-	GEST ENP	Company Management Seminar	2	COM3	Personal and Professional Development 1	1	COM4	Personal and Professional Development 2	1	COM6	Personal and Professional Development 3	3		
LANG1	Foreign languages*	3	LANG2	Foreign languages*	3	LANG3	Foreign languages*	3	LANG4	Foreign languages*	3	LANG4	Frech as a foreign language*	3		
MET IER1	Career Exploration Internship (1 week)	3	MET IER2	On-Site Internship and Safety on Construction Sites (1 month)	4	MET IER3	Knowledge of the Working World (Compulsory electives)	2	SPI	Practical Engineering Internship (SPI) 3 Months from May to July	14	MET IER4	Career Exploration and Preparation 3	-		

Urban Hydraulics				Hydrosystems - Focus on Surface Systems				Water Treatment				Utility Management and Construction Sites				Ecology / Ecological engineering			
Code	Module	Language	ECTS	Code	Module	Language	ECTS	Code	Module	Language	ECTS	Code	Module	Language	ECTS	Code	Module	Language	ECTS

Semester 8 (Spring term)

VAL ENER	Thermodynamic Approach to Treatments	FR	2	HYDROM OD1	Modelling Tools for Water Resource Management 1	FR	2	VAL ENER	Thermodynamic Approach to Treatments	FR	2	VAL ENER	Thermodynamic Approach to Treatments	FR	2	HYDROM OD1	Modelling Tools for Water Resource Management 1	FR	2
PGSSE	Water Sanitary Security Management plan	FR	3	HYDROM OD2	Modelling Tools for Water Resource Management 2	FR	2	PGSSE	Water Sanitary Security Management plan	FR	3	PGSSE	Water Sanitary Security Management plan	FR	3	HYDROM OD2	Modelling Tools for Water Resource Management 2	FR	2
HYDRAUM OD	3D Modelling Hydraulics	FR	3	ECOSIG	GIS & Ecology : bases of competence "Trame verte"	FR	4	HYDRAUM OD	3D Modelling Hydraulics	FR	3	HYDRAUM OD	3D Modelling Hydraulics	FR	3	ECOSIG	GIS & Ecology : bases of competence "Trame verte"	FR	4

Total ECTS Specialisation in Semester 8

8

Semester 9 (Autumn term)



PILOT	Public Performance Monitoring and Expertise	EN	3	GESTER	Territorial Management of the Environment and Risks	EN	6	PILOT	Service Organisation and Expertise	EN	3	PILOT	Service Organisation and Expertise	EN	3	GESTER	Territorial Management of the Environment and Risks	EN	6
MOD	3D Modelling for Sanitation and Drinking Water Supply	FR	3					NOR MAL	Standardisation and Risk Evaluation	EN	3	NOR MAL	Standardisation and Risk Evaluation	EN	3	REAL TRAV	Contracts for the Public Sector	FR	3
MOD ASS	Advanced Modelling for Sanitation	FR	3	GESER	Erosion and Solid Matter Transport	EN	2	TREAU C2	Drinking Water Treatment 2	EN	3	DIA GOUV	Diagnostics and Rehabilitation of Water Storage Infrastructure	FR	3	GME	Species and ecosystem management	FR	3
MOD AEP	Quality Modelling for Water Supply	FR	3	GES QUAL1	Contaminant Transport in Hydrosystems	EN	4	TREAU S2	Wastewater Treatment 2	EN	3	ING ECOL	Ecological Engineering	EN	3	GC3	Civil Engineering - Project Construction / Network Implementation	FR	3
GC3	Project Construction and Network Implementation	FR	3	ING ECOL	Ecological Engineering	EN	3	ING ECOL	Ecological Engineering	EN	3	GC3	Civil Engineering - Project Construction / Network Implementation	FR	3	SCOT	Territorial coherence and landscape continuity	FR	3
GEST PAT	Management of Potable Water Stewardship and Sanitation	FR	2	GES QUAL2	Management of Aquatic Natural Environments	EN	3	TREAU S3	Wastewater Treatment Modelling	EN	2	GEST PAT	Management of Potable Water Stewardship and Sanitation	FR	3	REX	Ecological restoration	FR	3
HYDROMO D3	Management of Flooding Risks and 2D Urban Stream Flood Modelling	EN	3	HYDROM OD3	Management of Flooding Risks and 2D Urban Stream Flood Modelling	EN	3	MHY TREA	Modelling Hydrodynamic and Reactive Transfers in Constructed Wetland	EN	3	EXPLOIT	Operation of Systems	FR	3	ECOQUANT	Theoretical and quantitative ecology	FR	3
PROTEC	Technological Project/ Company Project	FR	3	PROTEC	Technological Project/ Company Project	EN	3	PROTEC	Technological Project/ Company Project	EN	3	PROTEC	Technological Project/ Company Project	FR	3	PROTEC	Technological Project/ Company Project	FR	3

Total ECTS Specialisation in Semester 9

24