



Water and Environmental Engineering Degree



INFORMATION AT A GLANCE

As of: March 2020



National School for Water and Environmental Engineering - Strasbourg
Department of International Relations
1 quai Koch – F-67000 Strasbourg
www.engees.unistra.fr
engees-ri@unistra.fr

CONTENTS

1. The ENGEES Engineering School	3
2. The Water and Environmental Engineering Degree	4
2.1 General information	4
2.2 Specialisation subjects	4
2.3 Courses in English	4
2.4 Overview of the degree programme and specialisations	4
2.5 Internships	7
2.6 Internationalisation 'at home'	7
2.7 Incoming mobility – study abroad at ENGEES	8
2.8 Outgoing mobility – stays abroad	8
 Contacts at the Department of International Relations	 8

1. The ENGEES Engineering School

The Strasbourg 'National School for Water and Environmental Engineering' (*Ecole Nationale du Génie de l'Eau et de l'Environnement* or ENGEES for short) is a prestigious French engineering school ('*Grande Ecole*'), and a research facility for water and environmental engineering.

ENGEES is located directly opposite the university in the picturesque city centre of Strasbourg. It is approved by the National Accreditation Authority for Engineering Degrees (CTI) to bestow the French engineering title and trains over 100 graduates as water and environmental engineers every year.

In addition to the degree course in Water and Environmental Engineering (*Ingénieur ENGEES*), the courses offered by the school include:

- Four Specialised Master's programmes (*Mastère spécialisé*):
 - Drinking Water and Sanitation
 - Management, Treatment and Recovery of Waste
 - Wastewater and Surface Runoff Management
 - Water Supply Catchment Manager (new in 2019)
- Two ENGEES-specific professional degrees:
 - Geomatics for the Water Sector
 - Management of Geothermal Projects
- Over 60 short qualifying sessions for professionals in the field of water, environmental engineering and waste
- One professional Bachelor's degree (corresponds to the last year of a Bachelor's) in the Protection of the Environment with a specialisation in the 'Management of Urban and Rural Water' in partnership with the University of Strasbourg
- Seven co-accredited Masters programmes with universities, largely in partnership with the University of Strasbourg:
 - Engineering and Geosciences for the Environment ISIE
 - Computational Engineering - Sciences and Engineering MNI (in English)
 - Energy Management and Law and Sustainable Development
 - Environmental Geography
 - Remote Sensing and Geomatics
 - Business Administration - Engineering Manager Alsace Tech
 - Water- Environment - Oceanography (USTH Vietnam)

The four **ENGEES research units** are joint facilities with the University of Strasbourg and the CNRS (French National Centre for Scientific Research) or Irstea (French National Research Centre of Science and Technology for Environment and Agriculture):

- Social Sciences: UMR GESTE Water and Risk Management, Public Utilities Management
- Fluid Mechanics: UMR ICUBE Urban Hydraulics, Floods, Waste Water Treatment
- Hydrology, Geochemistry: UMR LHYGES Water Flows and Solute Within Hydro Systems, Environmental Chemistry
- Hydro Ecology, Hydro Morphology: UMR LIVE Restoration and Assessment of Hydro-Ecosystems



For a three-minute **visit by video**, click here:

[ENGEES – The French Engineering School in the Sectors of Water and the Environment](#)

2. Water and Environmental Engineering Degree

2.1 General information

In France, aspiring engineers first complete a two-year undergraduate intensive preparatory programme in mathematics/sciences or engineering. Following this, they must successfully pass an entrance exam for the engineering degree (usually in the form of so-called 'selective admission', concours).

Students at ENGEES then go on to do a **three-year graduate program in Water and Environmental Engineering** (from the 5th to the 10th semester), which concludes with the French '*Diplôme d'Ingénieur ENGEES*' (Engineering Master's Degree in Water and Environmental Engineering).

This ENGEES degree programme includes:

- a classic degree programme (student status) and
- an integrated degree course (apprentice status) with practical blocks at a company or corporation in France or in Baden-Württemberg in Germany (cross-border dual degree course).

The degree attained is the same for both types of study.

The engineering studies at ENGEES provide solid technical and scientific knowledge and competencies not only in water and environmental engineering, but also in project management, the socio-economic environment, the legal framework and foreign languages.

The classic studies programme is presented in this *Information at a Glance*.

2.2 Specialisation subjects

In the 8th and 9th specialisation semesters, students choose one of the following five specialisation subjects (compulsory electives):

- Hydrosystems
- Water Treatment
- Urban Hydraulics
- Utility Management and Construction Sites
- Solid Waste

2.3 Courses in English

Starting from the 2019/2020 academic year, ENGEES will be offering the following courses in English in the **9th specialisation semester** (autumn term) (see also 2.4):

- the specialisation courses on hydrosystems and water treatment as well as
- the compulsory modules with credits






Students from abroad have the option of completing a full semester (30 ECTS) in English at ENGEES.

2.4 Overview of the degree programme and the specialisation subjects

The module overviews of the degree in Water and Environmental Engineering as well as the five specialisation subjects are shown on the following two pages.

Water and Environmental Engineering Degree (Master of Engineering)

Module Overview 2020/2021

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	3	ECOV1 BIO	Life Sciences	3	MECA SOL	Civil Engineering 1	3	GC2	Civil Engineering 2	3	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 Solid Waste 24 Final Engineering Project 6 Months			30	
SOLVI BIO	Agronomy, Ecology and Microbiology	3	GENI PROC	Process Engineering	3	TREAU C1	Drinking Water Treatment	3	Specialisation (Compulsory electives) See detailed information on the next page							6
CHIM EAU	Water Chemistry	3		Pipe and Open Channel Hydraulics	3	TREAU S1	Wastewater Treatment	3								
MECA FLU	Fluid and Continuum Mechanics	3	HF	HEC RAS Modelling, Solid Matter Transport	3	RESP2	Drinking Water Networks 2	3	VOY AGE	Excursion	-					
HYDRO LOG	Hydrology	3	RESP1	Drinking Water Networks 1	3	RESU2	Sewer Systems 2	3	PRO PLU	Multidisciplinary Project 2	3					
HYDRO GEO	Hydrogeology	3	RESU1	Sewer Systems 1	3	METRO	Metrology	3	DECID AID	Financial Decision-Making in Engineering	3					
STATS	Statistics and DBMS	3	DON NEES	Data Analysis, CAD, GIS	3	ENVIS	Social Sciences of the Environment (Compulsory electives)	3	LANG4	Foreign languages*	3					
GEMINA	Public Management of the Environment and Stakeholders	3	PRORIV	Multidisciplinary Project 1	3	DROIT	Environmental and Urban Law	3	ENGAG ETU	Student Volunteerism Project	3	INGEN INT	International Engineering (in English) 	3		
MANA GING	Project Management and Sustainable Development	3	GEST ENP	Company Management Seminar	3	LANG3	Foreign languages*	3	COM4	Personal and Professional Development 2	-	MANAG PRO	Advanced Project Management (in English) 	3		
LANG1	Foreign languages*	3	LANG2	Foreign languages*	3	MET IER3	Knowledge of the Working World (Compulsory electives)	3	SPI Practical Engineering Internship (SPI) 3 Months from May to July			MET IER4	Career Exploration and Preparation 3	-		
COM1	Career Exploration and Preparation 1	-	COM2	Career Exploration and Preparation 2	-	COM3	Personal and Professional Development 1	-				COM6	Personal and Professional Development 3	-		
MET IER1	Career Exploration Internship	-	MET IER2	On-Site Internship and Safety on Construction Sites	-							FLE	French as a Foreign Language (Offered for Incoming Students from Abroad)*	3		
30			30			30			30			30			30	
120 ECTS																

Water and Environmental Engineering (Master of Engineering) Specialisations - Module Overview 2020/2021

Urban Hydraulics				Hydrosystems - Focus on Surface Systems				Water Treatment				Utility Management and Construction Sites				Solid Waste			
Code	Module	Language	ECTS	Code	Module	Language	ECTS	Code	Module	Language	ECTS	Code	Module	Language	ECTS	Code	Module	Language	ECTS


Semester 8

VAL ENERG	Thermodynamic Approach to Treatments	FR	3	HYDRO MOD1	Modelling Tools for Water Resource Management 1	FR	3	VAL ENERG	Thermodynamic Approach to Treatments	FR	3	VAL ENERG	Thermodynamic Approach to Treatments	FR	3	VAL ENERG	Thermodynamic Approach to Treatments	FR	3
HYDRAU MOD	3D Modelling Hydraulics	FR	3	HYDRO MOD2	Modelling Tools for Water Resource Management 2	FR	3	AUTOM	Electrotechnics and Automation	FR	3	AUTOM	Electrotechnics and Automation	FR	3	AUTOM	Electrotechnics and Automation	FR	3

Total ECTS Specialisation in Semester 8

6

Semester 9

																See detailed information on our website (in French) Gestion traitement et valorisation des déchets (GEDE)			
PILOT	Public Performance Monitoring and Expertise	EN	3	GESTER	Territorial Management of the Environment and Risks	EN		PILOT	Service Organisation and Expertise	EN	3	PILOT	Service Organisation and Expertise	EN	3				
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				
MOD ASS	Advanced Modelling for Sanitation	FR	3	GESER	Erosion and Solid Matter Transport	EN	3	TREAU C2	Drinking Water Treatment 2	EN	3	REAL TRAV	Contracts for the Public Sector	FR	3				
MOD AEP	Quality Modelling for Water Supply	FR	3	GES QUAL1	Contaminant Transport in Hydrosystems	EN	3	TREAU S2	Wastewater Treatment 2	EN	3	DIA GOUV	Diagnostics and Rehabilitation of Water Storage Infrastructure	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				
GEST PAT	Management of Potable Water Stewardship and Sanitation	FR	3	GES QUAL2	Management of Aquatic Natural Environments	EN	3	TREAU S3	Wastewater Treatment Modelling	EN	3	GEST PAT	Management of Potable Water Stewardship and Sanitation	FR	3				
HYDRO MOD3	Management of Flooding Risks and 2D Urban Stream Flood Modelling	EN	3	HYDRO MOD3	Management of Flooding Risks and 2D Urban Stream Flood Modelling	EN	3	MHY TREA	Modelling Hydrodynamic and Reactive Transfers in Constructed Wetland	EN	3	DROI TRAV	Team Management, Labour Law, Operational Safety	FR	3				
PROTEC	Technological Project/ Company Project	FR	3	PROTEC	Technological Project/ Company Project	EN	3	PROTEC	Technological Project/ Company Project	EN	3	EXPLOIT	Operation of Systems	FR	3				

Total ECTS Specialisation in Semester 9

24

2.5 Internships

Students complete at least **ten months of internships** during their studies:

- 1 week “Career Exploration Internship” in order to get to know the job profiles (in the 5th semester)
- 4 weeks “On Site Internship” (in the 6th semester)

In this internship, students will familiarise themselves with the practical activities and processes at a construction site (e.g. construction of sewers, drinking water network restoration measures and the like) carried out by a team of workers on site.

- 3 months “Practical Engineering Internship” (at the end of the 8th semester)

The aim of the internship is to put into practice the knowledge acquired in the degree course as part of a three-month job in engineering.

- 6 months “Final Engineering Internship” (10th semester)

Students demonstrate their competency with their own projects, writing their theses with direct practical relevance for the company or for research, and defending it afterwards.

2.6 Internationalisation 'at home'

ENGEES particularly encourages the internationalisation of its engineering degree programme, so that students may acquire important skills and experiences which are very valuable for a later career in the field of water and environmental engineering in an international context, either abroad or in France.

The internationalisation 'at home' is based above all on:

Foreign language courses

All engineering students have to take language courses in two foreign languages for four semesters.

To obtain the engineering degree, English is mandatory and the recommended level is C1 of the Common European Framework of Reference for Languages. The successful completion of the TOEIC test (minimum score of 785, level B2) is a prerequisite for the successful completion of the engineering degree.

For the second foreign language, students have the choice between German, Spanish, Italian, Russian, Japanese and Chinese.

Technical courses in English and incoming mobility for studies

ENGEES is in the process to extend its range of technical courses in English (for the current range see 2.3 and 2.4.). The aim is to promote the acquisition of subject-specific competences for work within an international context and to increase the number of incoming students from partner universities and engineering schools abroad.

Preparation for a professional career

Students participate in workshops which facilitate their entry into the profession within an international context (e.g. they work on their CVs and cover letters, prepare interviews, and improve their skills in scientific communication and reasoning). At the end of the 9th semester, they participate in recruitment interviews in English conducted by partners of the School.

2.7 Incoming mobility – study abroad at ENGEES

The ninth semester with the technical courses in English is particularly suitable for incoming students who have very limited knowledge of French.

A 'French as a Foreign Language' course is offered every semester to enable students from abroad to improve their knowledge and integrate better.

Exams and papers can be written in English or in French for all courses (regardless of whether or not the course is taught in English).

Buddy programme: Students from abroad can rely on their 'buddy' during their stay. This refers to a French partner student who facilitates networking with French students, and who is on hand for help and advice (welcoming, administrative formalities, studies, etc.).

In addition, the ENGEES team - in particular the lecturers, the staff at the Study Co-ordination Office and at the Department of International Relations - are also of course available to offer advice and support.

2.8 Outgoing mobility – stays abroad

The regular students enrolled at ENGEES have to complete a minimum of three months stay abroad. In this respect, the options are as follows:

Study abroad:



- The 9th semester is the classic mobility semester for study abroad at one of the many partner universities and engineering schools abroad. The ENGEES also has made special double diploma agreements with certain partners that go beyond the 9th semester.
- In addition, since 2019 there is an option of doing the so-called 'Parcours Allemagne' of ENGEES: a full year, 8th and 9th semester, at a partner university in Germany. The Practical Engineering Internship can also be integrated into this framework.

Internship abroad:

- The Practical Engineering Internship in the 8th semester
- The Final Engineering Project in the 10th semester

On average, students in engineering currently spend just over four months abroad.

Contacts

Sandra Nicolle Head of International relations – Erasmus Coordinator  
Sandra.nicolle@engees.unistra.fr
Tel. +33 (0)3 88 24 82 16

Cathie Hoerth Assistant International Relations –   
cathie.hoerth@engees.unistra.fr
Tel. +33 (0)3 88 24 82 15
or: engees-ri@unistra.fr