

# Study programmes 2025-2026

# **Faculty of Sciences**

# Advanced Master in the Water-Energy-Food Nexus

# Block view of the study programme

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Comm	laawr	
Combu	usorv	courses

### Module 1: Introduction and basic concepts

Opening seminars of the water-energy	. f 1 M	" DIEI DEDC C:11"	COLUMET D	
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HULG0559-1	Challenges of sustainable development, transition and development of the	Q1				4
	EEA Nexus dimension					
	- Challenges of sustainable development and transition -	2	22,5	-	-	
	Valentin COUVREUR, Nathalie DELZENNE, Valérie SWAEN					
	- Development of the EEA Nexus dimension - Charles BIELDERS,	(	5 :	3	-	
	Gilles COLINET, Bernard TYCHON					

#### Module 2: The 3 components of the NEXUS EEA

#### Water security component

ENVT3040-2	Integrated and participative management of water resources -	Q1 24	16	-	4
	Johan Derouane, Joost Wellens				

## **Energy security component**

ENVT0892-1	Integrated energy management, particularly in the construction industry -	Q1	28	12	-	4
	Philippe Andre, Maxime Habran, N					

#### Food security component

ENVT0073-1	Agricultural production systems and food security - Antoine DENIS,	Q1	20	20	-	4
	Pierre OZER, Bernard TYCHON					

### Module 3: Interconnections of the 3 components of the EEA Nexus and case studies

ENVT0074-1	Nexus Water-Energy-Food seminars: case studies of interconnections - Charles BIELDERS, Gilles COLINET, Antoine DENIS, Bernard TYCHON - [38h SEM, 10h Vis.]	TA	-	-	[+]	4
HULG0560-1	Natural resources: appropriation and resistance - An ANSOMS	Q2	30	-	-	3
HULG0561-1	Water-Food Nexus: modelling and analysis tools - Mathieu JAVAUX, Marnik VANCLOOSTER - Suppl : Alice ALONSO	Q2	22,5	22,5	-	4

## **Module 4: Technical tools**

ENVT2027-4	Application of teledetection and geographical information systems for	Q1	12	24	-	3
	environmental management - Antoine DENIS, Bernard TYCHON					

#### Module 5: Personal work in the form of an internship

STFE0035-1	Personal work in the form of an internship - Collégialité,	Q2 -	-	[+]	15
	Moussa El Jarroudi - [1 5mois Internshin]				

## **Optional courses**

Note: for an annual programme of more than 60 credits, contact the Beadle's office

## Module 2: The 3 components of the NEXUS EEA

In agreement with the Jury, choose courses for a total of 7 to 8 credits, including a maximum of 1 course among the courses ENVT3035-2 and ENVT0068-2

## Water security component

HULG0562-1	Irrigation and drainage - Mathieu JAVAUX	Q2	22,5	22,5	, –	4
ENVT3035-2	Wastewater treatment, production of drinking water and recovery of wastewater for irrigation - Hugues Jupsin - [10h FT]	Q1	24	6	[+]	4

### **Energy security component**



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ENVT0905-1	Energy communities - Philippe Andre, Damien Ernst	Q1	20	20	-	4
ENVT0068-2	$\begin{tabular}{ll} \textit{Exploitation of renewable energy} &- \textit{Philippe Andre, Vincent Hanus, N,} \\ N &- [0,5d\ FT] \end{tabular}$	Q1	37	3	[+]	4
Food security of	component					
HULG0487-1	Soil management and development in warm region - Charles Bielders, $N\dots$	Q2	22	8	-	3
GEST3019-2	Food policies and strategies (english language) - N Suppl : Arno FAIVRE - [3h FT]	Q1	9	15	[+]	3
Module 3: Interco	onnections of the 3 components of the EEA Nexus and case studies					
[] In agreeme	ent with the Jury, choose courses for a total of 5 to 6 credits from:					
GEOG0073-1	Town and country planning, food and energy security - Serge SCHMITZ	Q2	24	-	-	3
HULG0490-1	Evaluation of the environmental impact: diagnosis and indicators - Charles BIELDERS, Pierre DEFOURNY	Q2	22,5	-	-	3
ENVT0075-1	Waste: water, energy and food resources - N [3h Vis.]	Q2	21	-	[+]	3
ECON0945-1	Economy, energy and environment - Axel GAUTIER, Jérome SCHOENMAECKERS	Q1	16	-	-	2
Module 4: Techni	ical tools					
Choose, in accorda	ance with the Jury, 1 course among:					
HULG0563-1	Evaluation of the environmental impact: project and introduction to managing databases, part F: Managing databases - Antoine Denis, Guillaume LOBET	Q2	12	12	-	2
ENVT0736-6	Development projects management and communication, Théorie et travaux pratiques - Cécile CAVALADE, Bakary DJABY, Bernard TYCHON	Q1	12	12	-	2
GEST7085-1	Leadership best practices (english language) - Michael GHILISSEN	Q2	-	16	-	2