Vue bloc du programme des cours

		Or	Th	Pr	Au	Cr

Bloc 1

To complete their curriculum, students must earn or validate the 75 credits of the compulsory courses (including the master thesis and Internship), 30 credits from the professional focus and choose optional courses for 15 credits.
Ideally, students enrolling in the master program should have acquired the skills and knowledge corresponding to the 40 credits in " Energy " offered as part of the bachelor program in engineering.

Compulsory courses from the core curriculum

CHIM0695-2	*Modelling of chemical & energy processes* (anglais) - Grégoire LÉONARD	Q1	20	32	-	**5**
ELEC0055-3	*Element of power Electronics* (anglais) - *Partim A* - Fabrice FREBEL - *Partim B* - Fabrice FREBEL	Q1	 30 -	 6 20	 - -	**5**
ELEC0447-1	*Analysis of electric power and energy systems* (anglais) - Bertrand CORNÉLUSSE - [1j T. t.]	Q1	26	26	[+]	**5**
MECA0450-3	*Renewable Energy System Design* (anglais) - Pierre DEWALLEF - [24h Proj., 1j T. t.]	Q1	24	12	[+]	**5**
ENRG0001-1	*Energy challenge (including seminars)* (anglais) - Bertrand CORNÉLUSSE, Pierre DEWALLEF, Samuel GENDEBIEN, Vincent LEMORT, Grégoire LÉONARD - [3j T. t., 80h Proj.] **Corequis :** MECA0002-1 - Thermodynamique appliquée et introduction aux machines thermiques	TA	30	-	[+]	**10**

Optional courses from the core curriculum

Choisir des cours pour un total de 15 crédits parmi :

[...] Remark : Electives may also be replaced by one or more courses from the undergraduate "energy" option for which competencies would not be acquired. The courses ELEC0053-2, MECA0002-1 and SYST0022-1 are corequisite to some compulsory courses of the master program. They must be taken prioritarily, unless they were already taken as part of the bachelor in engineering, or unless the corresponding knowledge and skills have been acquired previously.

ELEC0053-2	*Circuits électriques* - Bertrand CORNÉLUSSE	Q2	26	26	-	**5**
SYST0022-1	*Linear Systems Design* (anglais) - Guillaume DRION, Pierre SACRÉ - [15h Proj.]	Q2	26	26	[+]	**5**
MECA0002-1	*Thermodynamique appliquée et introduction aux machines thermiques* - Vincent LEMORT	Q1	26	26	-	**5**
CHIM9315-1	*Gestion durable des combustibles : approvisionnement, synthèse et utilisation* - Angélique LÉONARD, Grégoire LÉONARD - [1j T. t., 25h Proj.]	Q1	44	4	[+]	**5**
CHIM0009-3	*Thermodynamique chimique appliquée* - MarieNoëlle DUMONT, Nathalie JOB, Grégoire LÉONARD - [44h Proj.]	Q2	26	26	[+]	**5**
GEOL1046-1	*Geothermal energy* (anglais) - Bertrand FRANÇOIS, Philippe ORBAN - [40h Proj., 1j T. t.]	Q2	18	15	[+]	**5**
ENRG0002-1	*Wind Energy* (anglais) - Thomas ANDRIANNE, Koen HILLEWAERT - [12h Proj.]	Q2	36	16	[+]	**5**
ENRG0003-1	*Hydropower* (anglais) - Sébastien ERPICUM - [20h Proj., 1j T. t.]	Q2	26	26	[+]	**5**
GENU0018-3	*Introduction to Nuclear Engineering and Power Plant Technnologies* (anglais) - Pierre DEWALLEF	Q2	26	26	-	**5**
GCIV0008-2	*Energy and transport* (anglais) - Mario COOLS - [25h Proj.]	Q1	30	15	[+]	**5**
ARCH3272-1	*Building performance simulation and monitoring* (anglais) - *Partim 1* - Shady ATTIA - *Partim 2* - Shady ATTIA - [70h Proj.]	Q1	 15 15	 15 25	 - [+]	**5**
ENRG0004-1	*CO2 capture, utilisation and storage* (anglais) - Motiar RAHAMAN - [4j T. t.]	Q2	26	22	[+]	**5**

MECA0034-1	*Energy flexibility in buildings* (anglais) - Vincent LEMORT	Q1	26	26	-	**5**
CHIM9330-1	*Management and safety of industrial processes* (anglais) - *Partim "Safety"* - Angélique LÉONARD, Grégoire LÉONARD, Dominique TOYE, Dominique TOYE - [2j T. t.] - *Partim "Management"* - Angélique LÉONARD, Grégoire LÉONARD - [1j T. t.]	Q1	 25 15	 - -	 [+] [+]	**1**

[...] Upon approval by the jury, 5 credits can be chosen among the courses of the two professional foci, from an other programme at ULiège or from the UNIC course catalog

Compulsory courses within the focus

MECA0037-1	*Thermal Power Plants and Combined Heat and Power* (anglais) - Pierre DEWALLEF - [12h Proj.] **Corequis :** MECA0002-1 - Thermodynamique appliquée et introduction aux machines thermiques	Q2	24	24	[+]	**5**
MECA0006-1	*Cooling and low-temperature heating systems* (anglais) - Vincent LEMORT - [4h Proj., 1j T. t.] **Corequis :** MECA0002-1 - Thermodynamique appliquée et introduction aux machines thermiques	Q2	26	26	[+]	**5**
MECA0532-1	*Turbomachines* - Koen HILLEWAERT	Q2	26	26	-	**5**

Bloc 2

Compulsory courses from the core curriculum

CHIM0664-3	*Electrochemical energy conversion and storage* (anglais) - *partim 1* - Nathalie JOB - *partim 3* - [3j T. t.]	Q1	 15 11	 - 7	 - [+]	**5**
ELEC0018-1	*Energy markets and regulation* (anglais) - Damien ERNST	Q1	39	13	-	**5**
GEST3162-1	*Principles of management* (anglais) - Michaël PARMENTIER, Willem STANDAERT - [25h Proj.]	Q1	30	-	[+]	**5**
ATFE9011-1	*Master's thesis and Internship* (anglais) - Pierre DEWALLEF - [750h Proj.]	TA	-	-	[+]	**30**

Compulsory courses within the focus

ENRG0005-1	*Power-to-fuel systems* (anglais) - Motiar RAHAMAN - [4j T. t.]	Q1	26	22	[+]	**5**

Optional courses within the focus

Select 10 credits among :

MECA0032-1	*Flow in turbomachines* (anglais) - Koen HILLEWAERT - [60h Proj.]	Q1	26	26	[+]	**5**
MECA0041-1	*Internal combustion engine* (anglais) - *Partim 1 : Fundamental aspects* - Marc NÉLIS - [1j T. t., 15h Proj.] - *Partim 2 : Application to propulsion* - Marc NÉLIS - [10h Proj., 0,5j T. t.]	Q2	 15 10	 15 10	 [+] [+]	**5**
MECA0527-1	*Electric, hybrid and fuel cell vehicles* (anglais) - Pierre DUYSINX - [5h Labo., 15h Proj.]	Q1	30	10	[+]	**5**
MECA0531-1	*Experimental Evaluation of Components and Processes* (anglais) - [6h Labo., 14h Proj.]	Q1	23	17	[+]	**5**
ELEC0041-1	*Modelling and design of electromagnetic systems* (anglais) - Christophe GEUZAINE (années impaires)	Q2	26	26	-	**5**
MECA0536-1	*Hydrogen technologies in mobility* (anglais) - [10h Labo., 10h Proj., 2j T. t.]	Q1	40	-	[+]	**5**