First Year

Students studying for the Bachelors in Civil Engineering who have not chosen the appropriate option :

* must take all the so-called "prerequisite" courses hereafter, if they were not taken during the 1st cycle. These courses must be taken during the 1st year of the masters and some 1st-year compulsory courses must be rolled over to the 2nd year.
* must subsequently reduce the number of courses they choose to take in the 2nd year of the masters. If all the "prerequisite" courses must be taken, it will be impossible for them to choose which courses they take.
* cannot choose the professional "management" focus.

The program adapted by these students has to receive the preliminary agreement of the Jury.

Compulsory prerequisites

MECA0443-1	*CAO / Finite Element Methods* - Eric BÉCHET, Jean-Philippe PONTHOT	45	30	-	**6**
MECA0155-1	*Dynamics of Mechanical Systems* - Jean-Claude GOLINVAL	30	30	-	**5**
MECA0012-5	*Mechanics of materials* (english) - Serge CESCOTTO	30	30	-	**5**
MECA0018-1	*Industrial Forming Processes* - Jean-François DEBONGNIE	30	30	-	**5**
MECA0002-1	*Applied Thermodynamics and Introduction to Heat Engines* - N... - Suppl : Olivier LÉONARD	30	30	-	**5**
MECA0445-2	*Transfers of heat and matter* - Michel HOGGE	30	15	-	**4**

Compulsory courses

MECA0023-1	*Advanced Solid Mechanics* - Jean-Philippe PONTHOT	30	30	-	**5**
MECA0475-1	*Integrated design* - Jean-Luc BOZET	20	40	-	**5**
APRI0005-1	*Integrated mechanical project* - COLLÉGIALITÉ - Suppl : Pierre DUYSINX - [5d FW]	-	60	[+]	**5**
MECA0444-1	*Mechanical design* - Jean-François DEBONGNIE	30	30	-	**5**
MECA0038-1	*Measurement uncertainties and dimensional metrology* - Liviu MASALAR	30	30	-	**5**
MATH0461-1	*Intorduction to optimization* - Quentin LOUVEAUX	30	30	-	**5**
MECA0069-1	*Series Production Methods* - Jean-François DEBONGNIE	30	30	-	**5**
MECA0004-1	*Vehicle performance and behaviour* - Pierre DUYSINX	30	30	-	**5**
PHYS0904-1	*Physics of materials* - Jacqueline LECOMTE#BECKERS, Jean-Marie LIÉGEOIS	30	30	-	**5**
MECA0462-1	*MECA0462: materials selection* - Jacqueline LECOMTE#BECKERS	30	30	-	**5**
MECA0029-1	*Mechanical Vibrations* - Gaëtan KERSCHEN	30	30	-	**5**
MECA0467-1	*Turbomachines* - Olivier LÉONARD	30	30	-	**5**

Notice : Students who have, in their BAC studies, have already taken one or more compulsory courses in this Master's programme are obliged to replace them by other courses on the following list of option courses; this choice must be approved by the President of the cycle's Jury.

List of option courses

MECA0474-1	*Mechanical CAD / CAM* - Eric BÉCHET	30	30	-	**5**
MECA0041-1	*Internal Combustion Engines* - Philippe NGENDAKUMANA - [1,5d FW]	30	30	[+]	**5**
MECA0031-2	*Kinematics and Dynamics of Mechanisms* - Olivier BRULS	30	30	-	**5**

Second Year

Compulsory courses

ATFE0013-1	*Final work* - COLLÉGIALITÉ	-	-	-	**20**
MECA0067-1	*Special Technology Issues* - Jean-François DEBONGNIE	30	30	-	**5**
[...]	A course to be chosen from the university's programme of courses (with the agreement of the cycle's President of the Jury)				

Compulsory courses

ASTG0018-1	*Industrial placement* - COLLÉGIALITÉ - [40d Internship]	-	-	[+]	**8**
MECA0481-1	*Introduction to research methodology* - Hassan BOUGRINE, Grigorios DIMITRIADIS, Pierre DUYSINX	10	10	-	**2**

Optional courses

Choose one module from :

Productive and mechanical engineering

Optional courses totalling 20 credits among courses of the module mechanical and productive engineering. With the agreement of the department's president students can also choose courses in the module land vehicules.

AERO0015-1	*Mechanical Design of Turbomachinery* - Jean-Claude GOLINVAL	30	30	-	**5**
CNAV0020-1	*Introduction to naval construction* - André HAGE, Jean MARCHAL, Philippe RIGO	40	30	-	**5**
SYST0015-1	*Automation and sustainability of industrial processes* - N... - Suppl : Pierre DUYSINX	30	30	-	**5**
MECA0138-1	*Welding and non-destructive tests* - N...	30	30	-	**5**
MECA0460-1	*Introduction to safety and health at work on machines-tools. Risk analysis* - Liviu MASALAR	15	15	-	**3**
MECA0035-1	*Lubrification and tribology* - Jean-Luc BOZET	30	30	-	**5**
MECA0068-3	*Numerical controlled machine-tools and flexible manufacturing* - Liviu MASALAR	30	30	-	**5**
MECA0051-2	*Total Quality Management* - Liviu MASALAR	30	30	-	**5**
MECA0446-1	*Continuum Mechanics* - Jean-Philippe PONTHOT	30	30	-	**5**
INFO0062-1	*Object-Oriented Programming* - Bernard BOIGELOT	30	30	-	**5**
MECA0139-2	*Rapid Prototyping* - Thierry DORMAL	10	10	-	**2**
MECA0120-1	*Hydraulic and pneumatic systems* - Liviu MASALAR	30	30	-	**5**
ECON0207-1	(pas organisé en 2008-2009) *Industrial Economics* - Axel GAUTIER	30	15	-	**5**
[...]	Courses from "Véhicules terrestres"				

Land Vehicles

Optional courses totalling 20 credits among courses of the module land vehicules. With the agreement of the department's president students can also choose courses in the module mechanical and productive engineering :

AERO0021-1	*Experimental Aerodynamics* - Grigorios DIMITRIADIS	30	30	-	**5**
SYST0003-1	*Linear control systems* - Damien ERNST, Rodolphe SEPULCHRE	30	30	-	**5**
MECA0063-1	*Vehicle Architecture* - Pierre DUYSINX	30	30	-	**5**
MECA0478-1	*Electric, hybrid and non-conventional propulsion systems* - Pierre DUYSINX	30	30	-	**5**
MECA0062-1	*Vibration Testing and Experimental Modal Analysis* - Jean-Claude GOLINVAL	30	30	-	**5**
MECA0027-1	*Structure Optimization* - Claude FLEURY	30	30	-	**5**
CHIM0664-1	*Combustible batteries and micro-batteries* - N... - Suppl : André RAHIER (TELNAT)	15	15	-	**3**
MECA0017-1	*Control system for land vehicles* - Pierre DUYSINX	30	30	-	**5**
MECA0034-4	*Rational Use of Energy, Air-conditioning in vehicles* - N... - Suppl : Philippe ANDRE	10	10	-	**2**
ECON0207-1	*Industrial Economics* - Axel GAUTIER	30	15	-	**5**
[...]	Courses from "Génie mécanique et productique"				