

## First Year

### Compulsory courses

AERO0001-1	<i>Aerodynamics</i> - Jean André ESSERS, Vincent TERRAPON	30	30	-	5
MECA0474-1	<i>Mechanical Computer-Aided-Design</i> (english language) - Eric BÉCHET	30	30	-	5
MECA0031-2	<i>Kinematics and Dynamics of Mechanisms</i> - Olivier BRULS	30	30	-	5
MECA0023-1	<i>Inelastic behavior of solids</i> - JeanPhilippe PONTHOT	30	30	-	5
AERO0030-1	<i>Computational fluid dynamics</i> (english language) - Vincent TERRAPON	30	30	-	5
AERO0023-1	<i>Aircraft design</i> - Grigorios DIMITRIADIS, Ludovic NOELS	30	30	-	5
AERO0003-1	<i>Flight mechanics and airplane performance</i> - Grigorios DIMITRIADIS	30	30	-	5
AERO0025-1	<i>Creation of satellite</i> - Gaëtan KERSCHEN	30	30	-	5
APRI0004-1	<i>Unified project in aerospace</i> - Ludovic NOELS - [5d FW]	-	60	[+]	5
AERO0014-1	<i>Aeronautic and Space Propulsion</i> - Olivier LÉONARD	30	30	-	5
MECA0462-2	<i>Materials selection</i> (english language) - Jacqueline LECOMTEBECKERS - [1d FW]	30	30	[+]	5
MECA0029-1	<i>Mechanical Vibrations</i> - JeanClaude GOLINVAL	30	30	-	5

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

### 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 adapted programme for these students must first gain be approved by the Jury.

### Compulsory prerequisites

MECA0036-1	<i>Finite Element Method</i> (english language) - JeanPhilippe PONTHOT	30	30	-	5
MECA0155-1	<i>Dynamics of Mechanical Systems</i> - JeanClaude GOLINVAL	30	30	-	5
MECA0012-5	<i>Solid mechanics</i> - Laurent DUCHENE	30	30	-	5
MECA0002-1	<i>Applied Thermodynamics and Introduction to Heat Engines</i> - Olivier LÉONARD	30	30	-	5
MECA0445-1	<i>Heat transfer</i> - Michel HOGGE	30	30	-	5
PHYS2026-1	<i>Physics 4 : Microscopic physics (partime a : waves optics, partime b : introduction to nuclear physics)</i> - Ngoc Duy NGUYEN	30	30	-	5

### Compulsory courses

MECA0001-1	<i>Mechanics of materials</i> - JeanPierre JASPART	30	30	-	5
SYST0002-1	<i>Linear systems</i> - Rodolphe SEPULCHRE	30	30	-	5
MECA0012-5	<i>Solid mechanics</i> - Laurent DUCHENE	30	30	-	5
MECA0445-1	<i>Heat transfer</i> - Michel HOGGE	30	30	-	5
MECA0155-1	<i>Dynamics of Mechanical Systems</i> - JeanClaude GOLINVAL	30	30	-	5
MECA0036-1	<i>Finite Element Method</i> (english language) - JeanPhilippe PONTHOT	30	30	-	5
MECA0474-1	<i>Mechanical Computer-Aided-Design</i> (english language) - Eric BÉCHET	30	30	-	5
MECA0031-2	<i>Kinematics and Dynamics of Mechanisms</i> - Olivier BRULS	30	30	-	5
MECA0025-1	<i>Fluid Mechanics</i> - Eric DELHEZ	30	30	-	5
AERO0003-1	<i>Flight mechanics and airplane performance</i> - Grigorios DIMITRIADIS	30	30	-	5
APRI0004-1	<i>Unified project in aerospace</i> - Ludovic NOELS - [5d FW]	-	60	[+]	5
MECA0462-2	<i>Materials selection</i> (english language) - Jacqueline LECOMTEBECKERS - [1d FW]	30	30	[+]	5
MECA0029-1	<i>Mechanical Vibrations</i> - JeanClaude GOLINVAL	30	30	-	5
AERO0023-1	<i>Aircraft design</i> - Grigorios DIMITRIADIS, Ludovic NOELS	30	30	-	5
AERO0025-1	<i>Creation of satellite</i> - Gaëtan KERSCHEN	30	30	-	5

## Second Year

First quadrimester

**Compulsory courses**

AERO0015-1	<i>Mechanical design of turbomachinery</i> (english language) - JeanClaude GOLINVAL	30	30	-	<b>5</b>
MECA0462-2	<i>Materials selection</i> (english language) - Jacqueline LECOMTEBECKERS - [1d FW]	30	30	[+]	<b>5</b>
MECA0058-1	<i>Fracture mechanics, damage and fatigue</i> (english language) - Ludovic NOELS	30	30	-	<b>5</b>
MECA0464-1	<i>Large deformation of solids</i> (english language) - JeanPhilippe PONTHOT	30	30	-	<b>5</b>

**Optional courses**

Choose two of the following courses :

MECA0474-1	<i>Mechanical Computer-Aided-Design</i> (english language) - Eric BÉCHET	30	30	-	<b>5</b>
MECA0502-1	<i>Mechanics of composites</i> (english language) - N... - Suppl : Michaël BRUYNEEL	30	30	-	<b>5</b>
AERO0016-1	<i>Fluid-structure interaction &amp; aeroelasticity</i> (english language) - Grigorios DIMITRIADIS	30	30	-	<b>5</b>
MECA0062-1	<i>Vibration testing and experimental modal analysis</i> (english language) - JeanClaude GOLINVAL	30	30	-	<b>5</b>

Second quadrimester

**Compulsory Courses**

ATFE0018-1	<i>Final work</i> (english language) - N...	-	-	-	<b>28</b>
MECA0510-1	<i>Introduction to methodology and research</i> - COLLÉGIALITÉ	-	-	-	<b>2</b>