Cycle view of the study programme

		Bl	Or	Th	Pr	Au	Cr
Compulsory Courses (B1 : 50Cr, B2 : 30Cr)							
MECA0462-2	*Materials selection* (english language) - Jacqueline LECOMTEBECKERS, Davide RUFFONI - [30h Proj., 1d FW]	B1	Q1	30	30	[+]	**5**
MECA0474-1	*Mechanical computer-Aided-Design* (english language) - Eric BÉCHET - [30h Proj.]	B1	Q1	30	30	[+]	**5**
MECA0029-1	*Theory of vibration* (english language) - JeanClaude GOLINVAL - [30h Proj.]	B1	Q1	30	30	[+]	**5**
AERO0025-1	*Satellite engineering* (english language) - Gaëtan KERSCHEN - [20h Proj.]	B1	Q1	60	-	[+]	**5**
AERO0001-1	*Aerodynamics* (english language) - Thomas ANDRIANNE, Vincent TERRAPON - [2h Labo., 25h Proj.]	B1	Q2	30	28	[+]	**5**
AERO0014-1	*Aerospace propulsion* (english language) - Olivier LÉONARD **Corequisite :** AERO0001-1 - Aerodynamics	B1	Q2	30	30	-	**5**
AERO0003-1	*Flight Dynamics and Control* (english language) - Grigorios DIMITRIADIS - Suppl : Patrick HENDRICK **Corequisite :** AERO0001-1 - Aerodynamics APRI0004-1 - Aerospace design project	B1	Q2	30	30	-	**5**
MECA0031-2	*Kinematics and dynamics of mechanisms* (english language) - Olivier BRULS - [40h Proj.]	B1	Q2	30	20	[+]	**5**
APRI0004-1	*Aerospace design project* (english language) - Ludovic NOELS - Suppl : Thomas ANDRIANNE - [10h Labo., 260h Proj., 5d FW] **Corequisite :** MECA0474-1 - Mechanical Computer-Aided-Design AERO0014-1 - Aerospace propulsion AERO0001-1 - Aerodynamics AERO0003-1 - Flight Dynamics and Control *Notice* : with the agreement of the President of the Jury, based on its technical content, the integrated project can be replaced by an interdisciplinary project (e.g., Ingénieur de projet, Eurobot, Eco-Shell Marathon) completed between the beginning of the third year of the bachelor and the end of the second year of the Master."	B1	TA	30	-	[+]	**10**
ATFE0005-1	*Master's thesis* - COLLÉGIALITÉ	B2	TA	-	-	-	**25**
GEST3162-1	*Principles of management* (english language) - Michael GHILISSEN, François PICHAULT, Thierry PIRONET, Didier VAN CAILLIE	B2	Q1	25	25	-	**5**
Optional courses (B1 : 10Cr, B2 : 30Cr)							
Choose an option between "Aeronautics" and "Space engineering" (B1 : 10Cr)							
Option Aeronautics (B1 : 10Cr)							
MECA0023-1	*Advanced solid mechanics* (english language) - JeanPhilippe PONTHOT - [20h Proj.]	B1	Q1	30	30	[+]	**5**
MECA0028-1	*Aeronautical structures* (english language) - Ludovic NOELS - [70h Proj.] **Corequisite :** APRI0004-1 - Aerospace design project	B1	Q2	30	20	[+]	**5**
Option in Space engineering (B1 : 10Cr)							
SPAT0048-4	*Atmosphere of the earth and space environment* (english language) - JeanClaude GÉRARD, Denis GRODENT	B1	Q2	45	15	-	**5**
AERO0018-3	*Space experiment development* (english language) - Pierre ROCHUS	B1	Q1	30	30	-	**5**

Notice : students who, in their bachelor's degree, took one or more of the compulsory course(s) must replace them by other(s) course(s) of the Faculty ; this choice must be approuved by the President of de cycle's jury.

Single focus (B2 : 30Cr)

Research focus (B2 : 30Cr)

Compulsory Courses

AERO0030-1	*Computational fluid dynamics* (english language) - Vincent TERRAPON - [10h Labo.]	B2	Q2	30	20	[+]	**5**

Optional courses

Choose 25 credits of course among : (B2 : 25Cr)

[...] The student must choose either an observation or an integration intership. If the observation internship is selected, 2 remaining credits should be selected within the research focus module

Compulsory Internship

ASTG0116-1	*Observation internship* - Pierre DEWALLEF **Corequisite :** GEST3162-1 - Principles of management	B2	TA	-	-	-	**3**
ASTG0117-1	*Integration internship* - Pierre DEWALLEF **Corequisite :** ATFE0005-1 - Master's thesis GEST3162-1 - Principles of management	B2	TA	-	-	-	**5**

[...] A maximum of 5 credits can be selected among the ISLV language courses organized in other Faculties or in the list below

Language

LANG1957-1	*Dutch for Engineers, part 1* (dutch language) - Claudine COLIN	B2	Q1	36	-	-	**3**
LANG2978-1	*Dutch for engineer, part 2* - Claudine COLIN **Corequisite :** LANG1957-1 - Néerlandais pour l'ingénieur, partim 1	B2	Q2	24	-	-	**2**
LANG1958-1	*German for engineer, Part 1* (german language) - Françoise CARL	B2	Q1	36	-	-	**3**
LANG2979-1	*German for engineers, part 2* - Françoise CARL, ISLV **Corequisite :** LANG1958-1 - Allemand pour l'ingénieur, partim 1	B2	Q2	24	-	-	**2**

Aeronautics

AERO0032-1	*Aeroelasticity and experimental aerodynamics* (english language) - Thomas ANDRIANNE **Prerequisite :** AERO0001-1 - Aerodynamics MECA0029-1 - Theory of vibration	B2	Q1	30	30	-	**5**
AERO0015-1	*Mechanical design of turbomachinery* (english language) - JeanClaude GOLINVAL - [30h Proj.] **Prerequisite :** MECA0029-1 - Theory of vibration	B2	Q1	30	30	[+]	**5**
MECA0502-1	*Mechanics of composites* (english language) - Michaël BRUYNEEL	B2	Q1	30	30	-	**5**
MECA0032-1	*Flow in turbomachineries* (english language) - Olivier LÉONARD - [60h Proj.] **Prerequisite :**	B2	TA	30	30	[+]	**5**

	AERO0001-1 - Aerodynamics **Corequisite :** AERO0030-1 - Computational fluid dynamics						
AERO0004-1	*Turbulent Flows* (english language) - Vincent TERRAPON - [40h Proj.] **Corequisite :** AERO0030-1 - Computational fluid dynamics	B2	Q1	30	30	[+]	**5**
AERO0033-1	*Aerothermodynamics of high-speed flows* (english language) - Thierry MAGIN - [1d FW] **Prerequisite :** AERO0001-1 - Aerodynamics	B2	Q2	30	30	[+]	**5**

Space engineering

ASTR0004-2	*Astrophysics and Space Techniques* (english language) - Jean SURDEJ - [5h Labo., 5h Proj., 5d FW]	B2	TA	30	15	[+]	**5**
AERO0024-1	*Astrodynamics* (english language) - Gaëtan KERSCHEN - [20h Proj.]	B2	Q1	30	30	[+]	**5**
SPAT0032-2	*remote sensing* (english language) - Christian BARBIER	B2	Q1	30	30	-	**5**
AERO0026-1	*Lauch vehicles design and propulsion* (english language) - JeanLuc BOZET, Philippe NGENDAKUMANA	B2	Q2	30	-	-	**5**
ELEN0008-1	*Principles of analog and digital telecommunications systems* - Marc VAN DROOGENBROECK	B2	Q2	30	30	-	**5**
AERO0033-1	*Aerothermodynamics of high-speed flows* (english language) - Thierry MAGIN - [1d FW] **Prerequisite :** AERO0001-1 - Aerodynamics	B2	Q2	30	30	[+]	**5**
PHYS0048-1	*Coherent and incoherent optics* (english language) - Serge HABRAKEN	B2	Q1	30	30	-	**5**
MECA0127-1	*Active Structure* (english language) - André PREUMONT	B2	Q1	30	30	-	**5**
[...]	With the agreement of the President of the Jury, a maximum of 5 credits can be selected among the courses of the Master in Space Sciences						

Computational mechanics

MECA0464-1	*Large deformation of solids* (english language) - JeanPhilippe PONTHOT - [60h Proj.]	B2	Q1	30	30	[+]	**5**
MECA0058-1	*Fracture mechanics, damage and fatigue* (english language) - Ludovic NOELS - [75h Proj.]	B2	Q1	30	10	[+]	**5**
MECA0062-1	*Vibration testing and experimental modal analysis* (english language) - JeanClaude GOLINVAL - [30h Proj.] **Prerequisite :** MECA0029-1 - Theory of vibration	B2	Q1	30	30	[+]	**5**
INFO0939-1	*High performance scientific computing* (english language) - Christophe GEUZAINE - [20h Proj.]	B2	Q1	30	15	[+]	**5**
MECA0027-1	*Structural and multidisciplinary optimization* - Pierre DUYSINX, Patricia TOSSINGS - [18h Proj.]	B2	Q1	30	12	[+]	**5**
INFO2046-2	*Computational geometry* (english language) - Eric BÉCHET - [95h Proj.]	B2	Q1	25	-	[+]	**5**
MECA0470-1	*New methodsin computational mechanics* (english language) - Maarten ARNST, Eric BÉCHET, Ludovic NOELS - [40h Proj.]	B2	Q2	20	-	[+]	**5**
MECA0010-1	*Scholastic modelling* (english language) - Maarten ARNST - [28h Proj.]	B2	Q2	16	16	[+]	**5**
[...]	One course of maximum 5 credits to choose among other courses of the Faculty : this choice must be approved by the cycle's jury President						

Notice : a student who, in his (her) bachelor degree, has already followed one or several optional course(s) of this list has to replace it.

Programme transitoire à destination des étudiants ayant réussi leur master 1 de "Master en ingénieur civil en aérospatiale, à finalité approfondie" en 2014-2015

Optional courses (B1 : 30Cr)

Single focus (B1 : 30Cr)

Research focus (B1 : 30Cr)

The student must choose 30 crédits of courses (B1 : 30Cr)

[...] The student must choose either an observation or an integration internship

ASTG0116-1	*Observation internship* - Pierre DEWALLEF	B1	TA	-	-	-	**3**
ASTG0117-1	*Integration internship* - Pierre DEWALLEF	B1	TA	-	-	-	**5**

[...] Maximum 25 crédits of courses within the Research focus module or courses of the 1st year master programme that have not been taken during 1st year to reach a total of 60 ECTS.

Note : The course AERO0030-1 must be chosen if this course has not been taken during the 1st year.

[...] A maximum of 5 credits can be selected among the ISLV language courses organized in other Faculties or in the list below

LANG1957-1	*Dutch for Engineers, part 1* (dutch language) - Claudine COLIN	B1	Q1	36	-	-	**3**
LANG2978-1	*Dutch for engineer, part 2* - Claudine COLIN	B1	Q2	24	-	-	**2**
LANG1958-1	*German for engineer, Part 1* (german language) - Françoise CARL	B1	Q1	36	-	-	**3**
LANG2979-1	*German for engineers, part 2* - Françoise CARL, ISLV	B1	Q2	24	-	-	**2**

[...] With the agreement of the President of the Jury, the student can choose a maximum of 5 credits among the other program of the Faculty.

Aeronautics

AERO0032-1	*Aeroelasticity and experimental aerodynamics* (english language) - Thomas ANDRIANNE	B1	Q1	30	30	-	**5**
AERO0015-1	*Mechanical design of turbomachinery* (english language) - JeanClaude GOLINVAL - [30h Proj.]	B1	Q1	30	30	[+]	**5**
MECA0502-1	*Mechanics of composites* (english language) - Michaël BRUYNEEL	B1	Q1	30	30	-	**5**
MECA0032-1	*Flow in turbomachineries* (english language) - Olivier LÉONARD - [60h Proj.]	B1	TA	30	30	[+]	**5**
AERO0004-1	*Turbulent Flows* (english language) - Vincent TERRAPON - [40h Proj.]	B1	Q1	30	30	[+]	**5**
AERO0033-1	*Aerothermodynamics of high-speed flows* (english language) - Thierry MAGIN - [1d FW]	B1	Q2	30	30	[+]	**5**

Space engineering

ASTR0004-2	*Astrophysics and Space Techniques* (english language) - Jean SURDEJ - [5h Labo., 5h Proj., 5d FW]	B1	TA	30	15	[+]	**5**
AERO0024-1	*Astrodynamics* (english language) - Gaëtan KERSCHEN - [20h Proj.]	B1	Q1	30	30	[+]	**5**
SPAT0032-2	*remote sensing* (english language) - Christian BARBIER	B1	Q1	30	30	-	**5**
AERO0026-1	*Lauch vehicles design and propulsion* (english language) -	B1	Q2	30	-	-	**5**

	OZET, Philippe NGENDAKUMANA						
ELEN0008-1	*Principles of analog and digital telecommunications systems* - Marc VAN DROOGENBROECK	B1	Q2	30	30	-	**5**
AERO0033-1	*Aerothermodynamics of high-speed flows* (english language) - Thierry MAGIN - [1d FW]	B1	Q2	30	30	[+]	**5**
PHYS0048-1	*Coherent and incoherent optics* (english language) - Serge HABRAKEN	B1	Q1	30	30	-	**5**
MECA0127-1	*Active Structure* (english language) - André PREUMONT	B1	Q1	30	30	-	**5**

With the agrement of President of the Jury, a maximum of 5 credits can be selected among the courses of the Master in Space Sciences

Computational mechanics

MECA0464-1	*Large deformation of solids* (english language) - JeanPhilippe PONTHOT - [60h Proj.]	B1	Q1	30	30	[+]	**5**
MECA0058-1	*Fracture mechanics, damage and fatigue* (english language) - Ludovic NOELS - [75h Proj.]	B1	Q1	30	10	[+]	**5**
MECA0062-1	*Vibration testing and experimental modal analysis* (english language) - JeanClaude GOLINVAL - [30h Proj.]	B1	Q1	30	30	[+]	**5**
INFO0939-1	*High performance scientific computing* (english language) - Christophe GEUZAINE - [20h Proj.]	B1	Q1	30	15	[+]	**5**
MECA0027-1	*Structural and multidisciplinary optimization* - Pierre DUYSINX, Patricia TOSSINGS - [18h Proj.]	B1	Q1	30	12	[+]	**5**
INFO2046-2	*Computational geometry* (english language) - Eric BÉCHET - [95h Proj.]	B1	Q1	25	-	[+]	**5**
MECA0470-1	*New methodsin computational mechanics* (english language) - Maarten ARNST, Eric BÉCHET, Ludovic NOELS - [40h Proj.]	B1	Q2	20	-	[+]	**5**
MECA0010-1	*Scholastic modelling* (english language) - Maarten ARNST - [28h Proj.]	-	Q2	16	16	[+]	**5**

Note : a student who, in his (her) bachelor degree, has already followed one or several optional course(s) of this list has to replace it.

Compulsory Courses (B1 : 30Cr)

ATFE0005-1	*Master's thesis* - COLLÉGIALITÉ	B1	TA	-	-	-	**25**
GEST3162-1	*Principles of management* (english language) - Michael GHILISSEN, François PICHAULT, Thierry PIRONET, Didier VAN CAILLIE	B1	Q1	25	25	-	**5**