Université de Liège

Study programmes 2008-2009
Faculty of Applied Sciences
Master in Engineering Physics, specialized approach

First Year

Bringing up to date

Choose an upgrading course among the following :

ELEN0040-1	*Digital Electronics* - Jacques DESTINÉ	30	30	-	**5**
ELEN0070-1	*Signal Processing* - Jacques VERLY	30	30	-	**5**
ELEN0075-1	*Analog Electronics* - Benoît VANDERHEYDEN	30	30	-	**5**
INFO0062-1	*Object-Oriented Programming* - Bernard BOIGELOT	30	30	-	**5**
MECA0155-1	*Dynamics of Mechanical Systems* - Jean-Claude GOLINVAL	30	30	-	**5**
MECA0446-1	*Continuum Mechanics* - Jean-Philippe PONTHOT	30	30	-	**5**
PHYS0055-1	*Introduction to Condensed Matter Physics* - Jean-Pierre GASPARD	30	30	-	**5**

Optional courses

Choose courses totalling 55 credits from the list below. The choice of courses not taken must be approved by the cycle's Jury President :

MECA0036-1	*Finite Element Method* - Jean-Philippe PONTHOT	30	30	-	**5**
MATH0024-1	*Further Study of Digital Analysis (Equations with Partial Derivatives)* - Jean-André ESSERS	30	30	-	**5**
MATH0461-1	*Intorduction to optimization* - Quentin LOUVEAUX	30	30	-	**5**
SYST0003-1	*Linear control systems* - Damien ERNST, Rodolphe SEPULCHRE	30	30	-	**5**
INFO0939-1	*High-performance scientific calculation / High performance scientific computing* (english) - Christophe GEUZAINE	30	30	-	**5**
MATH0471-1	*Multiphysical scientific calculation project: developing a digital-resolution code from equations to partial derivatives* - Jean-André ESSERS, Christophe GEUZAINE	-	20	-	**2**
PHYS0069-1	*Introduction to statistical physics* - Stéphane DORBOLO	30	30	-	**5**
CHIM0202-3	*Physical chemistry* - Edwin DE PAUW, Bernard LEYH	30	30	-	**5**
PHYS0048-1	*Coherent and Incoherent Optics* - Serge HABRAKEN	30	30	-	**5**
SPAT0048-2	*Physics of the earth's atmosphere and environment* - Jean-Claude GÉRARD	30	30	-	**5**
PHYS0961-1	*Irreversibility, instabilities and chaos* - Pierre DAUBY	30	30	-	**5**
ELEN0074-1	*Sensors, microsensors and instrumentation* - Philippe VANDERBEMDEN	30	30	-	**5**
[...]	A general course to be chosen from the University's programmes of courses ; this choice must be approved by the cycle's President of the 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 program adapted by these students has to receive the preliminary agreement of the Jury.

Compulsory prerequisites

PHYS0057-1	*Wave optics and wave mechanics* - Laurent DREESEN	30	30	-	**5**
MECA0445-1	*Transfers of heat and matter* - Michel HOGGE	30	30	-	**5**
MECA0025-1	*Fluid Mechanics* - Jean-André ESSERS	30	30	-	**5**
PHYS0211-3	*Quantum Mechanics* - Joseph CUGNON	30	30	-	**5**
MECA0012-5	*Mechanics of materials* (english) - Serge CESCOTTO	30	30	-	**5**
ELEN0076-1	*Electromagnetism* - Benoît VANDERHEYDEN	30	30	-	**5**

Compulsory courses

INFO0061-2	*Computers and operating systems* - Bernard BOIGELOT	30	30	-	**5**
MECA0001-1	*Solid mechanics* (english) - Serge CESCOTTO	30	30	-	**5**
SYST0002-1	*Linear systems* - Rodolphe SEPULCHRE	30	30	-	**5**
MECA0445-1	*Transfers of heat and matter* - Michel HOGGE	30	30	-	**5**
MECA0025-1	*Fluid Mechanics* - Jean-André ESSERS	30	30	-	**5**
MECA0012-5	*Mechanics of materials* (english) - Serge CESCOTTO	30	30	-	**5**

ELEN0076-1	*Electromagnetism* - Benoît VANDERHEYDEN	30	30	-	**5**
MECA0036-1	*Finite Element Method* - Jean-Philippe PONTHOT	30	30	-	**5**
MATH0024-1	*Further Study of Digital Analysis (Equations with Partial Derivatives)* - Jean-André ESSERS	30	30	-	**5**
MATH0461-1	*Intorduction to optimization* - Quentin LOUVEAUX	30	30	-	**5**
INFO0939-1	*High-performance scientific calculation / High performance scientific computing* (english) - Christophe GEUZAINE	30	30	-	**5**
MATH0471-1	*Multiphysical scientific calculation project: developing a digital-resolution code from equations to partial derivatives* - Jean-André ESSERS, Christophe GEUZAINE	-	20	-	**2**
PHYS0069-1	*Introduction to statistical physics* - Stéphane DORBOLO	30	30	-	**5**
CHIM0202-3	*Physical chemistry* - Edwin DE PAUW, Bernard LEYH	30	30	-	**5**
[...]	Non-technical training courses (to be chosen among courses on offer at the university ; the selection must meet with the approval of the president of the jury)				

Optional courses

Choose one of the following courses :

ELEN0040-1	*Digital Electronics* - Jacques DESTINÉ	30	30	-	**5**
ELEN0070-1	*Signal Processing* - Jacques VERLY	30	30	-	**5**
ELEN0075-1	*Analog Electronics* - Benoît VANDERHEYDEN	30	30	-	**5**
INFO0062-1	*Object-Oriented Programming* - Bernard BOIGELOT	30	30	-	**5**
MECA0155-1	*Dynamics of Mechanical Systems* - Jean-Claude GOLINVAL	30	30	-	**5**
MECA0446-1	*Continuum Mechanics* - Jean-Philippe PONTHOT	30	30	-	**5**
PHYS0055-1	*Introduction to Condensed Matter Physics* - Jean-Pierre GASPARD	30	30	-	**5**

Second Year

Compulsory courses

ATFE0016-1	*Final Work (including an introduction to methodology and research)* - COLLÉGIALITÉ	-	-	-	**25**

Optional courses

Choose the course that was not taken in the first year of the Master's degree among the following :

MECA0036-1	*Finite Element Method* - Jean-Philippe PONTHOT	30	30	-	**5**
MATH0024-1	*Further Study of Digital Analysis (Equations with Partial Derivatives)* - Jean-André ESSERS	30	30	-	**5**
MATH0461-1	*Intorduction to optimization* - Quentin LOUVEAUX	30	30	-	**5**
SYST0003-1	*Linear control systems* - Damien ERNST, Rodolphe SEPULCHRE	30	30	-	**5**
INFO0939-1	*High-performance scientific calculation / High performance scientific computing* (english) - Christophe GEUZAINE	30	30	-	**5**
MATH0471-1	*Multiphysical scientific calculation project: developing a digital-resolution code from equations to partial derivatives* - Jean-André ESSERS, Christophe GEUZAINE	-	20	-	**2**
PHYS0069-1	*Introduction to statistical physics* - Stéphane DORBOLO	30	30	-	**5**
CHIM0202-3	*Physical chemistry* - Edwin DE PAUW, Bernard LEYH	30	30	-	**5**
PHYS0048-1	*Coherent and Incoherent Optics* - Serge HABRAKEN	30	30	-	**5**
SPAT0048-2	*Physics of the earth's atmosphere and environment* - Jean-Claude GÉRARD	30	30	-	**5**
PHYS0961-1	*Irreversibility, instabilities and chaos* - Pierre DAUBY	30	30	-	**5**
ELEN0074-1	*Sensors, microsensors and instrumentation* - Philippe VANDERBEMDEN	30	30	-	**5**

Compulsory courses

GEST3000-1	*First steps in an enterprise* - Robert NONDONFAZ, Bernard SURLEMONT	0,5	-	-	**2**
GEST3001-1	*Organization analysis* - Annie CORNET	-	-	-	**3**
GEST3002-1	*Human Resources Management* - Jocelyne ROBERT	16	-	-	**3**
GEST3003-1	*Competitive Strategy in the Marketplace* (english) - Michael GHILISSEN	16	-	-	**3**
GEST3004-1	*Marketing (operations and management)* (english) - Michael GHILISSEN	16	-	-	**3**
GEST3005-1	*Accountancy and Finance* - Jacques BERWART	24	-	-	**4**
GEST3006-1	*Production (Supply chain management)* (english) - Yasemin ARDA	45	-	-	**3**
GSTG3001-1	*Internship* - COLLÉGIALITÉ	-	-	-	**6**

Optional courses

Choose one of the following courses :

GEST3010-1	*Production 2 (Supply Chain Management 2nd part)* (english) - Robert NONDONFAZ	-	-	-	**3**
GEST3011-1	*ICT in the service of the company* - Alain DUBOIS	30	-	-	**3**
GEST3012-1	*Financial and actuarial modelling tools* - Louis ESCH	16	-	-	**3**