UCL Study programme

2013 - 2014

Minor in Engineering Sciences: Mechanics

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Introduction

Admission

For the specific conditions of this program : refer to the French version

Information

Learning outcomes

The primary objective of the " polytechnic " minors organized by the Faculté des Sciences Appliquées is to allow students taking a baccalaureate in engineering science, if they so wish, to acquire, through a polytechnic major/minor, basic training in two specialist areas of engineering science, and thus to broaden their technical range of skills, or prepare for a master's in engineering science in a domain which spans the various basic courses offered at baccalaureate level. The disciplinary objectives of the minor in mechanics are to allow the student to acquire the basic concepts of theoretical and applied mechanics. For precisely, s/he will need to: Master this discipline via project and laboratory-based learning. Develop a deeper grasp of continuum mechanics (solids and fluid mechanics), in order to master the techniques of scale model studies and mathematical modeling required by these disciplines. Develop a deeper understanding of thermodynamics, both from a theoretical point of view (a deep understanding of thermodynamics, both from a theoretical point of view (understanding macroscopic concepts starting with kinetic theory of gases) as well as an applied point of view (technical and energetic thermodynamics). Acquire specialized training in machine design.

Possible trainings at the end of the programme

Majors-minors leading directly to a master's course(s) : For students who have performed well and obtained a bachelor's qualification in engineering science - civil engineering, the polytechnic minors guarantee them, as part of a program which includes one of these minors, unconditional access, without additional training, to the civil engineering master's which corresponds to this minor. For the minor in applied chemistry and physics: the civil engineering master's in chemistry and material science and the civil engineering master's physicist For the minor in construction : the civil engineering master's in construction For the minor in electricity: the civil engineering master's electrician For the minor in IT: the civil engineering master's in IT For the minor in mechanics: the civil engineering master's mechanic For the minor in applied mathematics: the civil engineering master's in applied mathematics For a program which combines the major in electricity/minor in mechanics, or major in mechanics/minor in electricity: the civil engineering master's electromechanic.

Contacts

Curriculum Managment

Entite de la structure MECA

Acronyme	**MECA**
Dénomination	Commission de programme - Ingénieur civil mécanicien
Adresse	Place du Levant, 2 bte L5.04.03 1348 Louvain-la-Neuve Tél 010 47 22 00 - Fax 010 45 26 92
Secteur	Secteur des sciences et technologies (SST)
Faculté	Ecole Polytechnique de Louvain (EPL)
Commission de programme	Commission de programme - Ingénieur civil mécanicien (MECA)

Academic Supervisor : Vincent LEGAT

Jury

Président du Jury : **Piotr SOBIESKI**

Usefull Contacts

Secrétariat : **Isabelle HENNAU**

Detailled programme

PROGRAMME BY SUBJECT

○ Mandatory	⊠ Optional
△ Courses not taught during 2013-2014	⊘ Periodic courses not taught during 2013-2014
⊕ Periodic courses taught during 2013-2014	⧺ Two years course

Click on the course title to see detailed informations (objectives, methods, evaluation...)

○ Cours obligatoires de la mineure en mécanique (15 credits)

					Year 2	Year 3
○ LMECA1120	Introduction to finite element methods.	Vincent Legat	30h+30h	5 Credits	2q	x	
○ LMECA1855	Thermodynamics and energetics.	Yann Bartosiewicz, Miltiadis Papalexandris	30h+30h	5 Credits	1q		x
○ LMECA1210	Description et analyse des mécanismes	Paul Fisette, Hervé Jeanmart, Benoît Raucent	30h+30h	5 Credits	2q	x	

⊠ Variante pour les étudiants inscrits en majeure ingénieur civil biomédical (15 credits)

○ LMECA1451	Mechanical manufacturing.	Laurent Delannay, Aude Simar	30h+30h	5 Credits	1q		x
○ LMECA1100	Deformable solid mechanics.	Issam Doghri	30h+30h	5 Credits	2q		x
○ LMECA1321	Fluid mechanics and transfer phenomena.	Vincent Legat, Grégoire Winckelmans	30h+30h	5 Credits	2q		x

⊠ Variante pour les étudiants inscrits en majeure ingénieur civil en chimie et physique appliquées. (15 credits)

○ LMECA1451	Mechanical manufacturing.	Laurent Delannay, Aude Simar	30h+30h	5 Credits	1q		x
○ LMECA1100	Deformable solid mechanics.	Issam Doghri	30h+30h	5 Credits	2q		x
○ LINMA1510	Linear Control	Denis Dochain	30h+30h	5 Credits	2q		x

⊠ Variante pour les étudiants inscrits en majeure ingénieur civil des construction. (15 credits)

○ LMECA1451	Mechanical manufacturing.	Laurent Delannay, Aude Simar	30h+30h	5 Credits	1q		x
○ LINMA1510	Linear Control	Denis Dochain	30h+30h	5 Credits	2q		x
○ LMECA1321	Fluid mechanics and transfer phenomena.	Vincent Legat, Grégoire Winckelmans	30h+30h	5 Credits	2q		x

⊠ Variante pour les étudiants inscrits en majeure ingénieur civil en mathématiques appliquées (15 credits)

○ LMECA1451	Mechanical manufacturing.	Laurent Delannay, Aude Simar	30h+30h	5 Credits	1q		x
○ LMECA1100	Deformable solid mechanics.	Issam Doghri	30h+30h	5 Credits	2q		x
○ LMECA1321	Fluid mechanics and transfer phenomena.	Vincent Legat, Grégoire Winckelmans	30h+30h	5 Credits	2q		x

⊠ Variante pour les étudiants inscrits en majeure ingénieur civil électricien (15 credits)

○ LMECA1901	Continuum mechanics.	Philippe Chatelain, Emilie Marchandise	30h+30h	5 Credits	1q		x
○ LMECA1100	Deformable solid mechanics.	Issam Doghri	30h+30h	5 Credits	2q		x

						Year 2	3
LMECA1321	Fluid mechanics and transfer phenomena.	Vincent Legat, Grégoire Winckelmans	30h+30h	5 Credits	2q		x

⊠ *Variante pour les étudiants inscrits en majeure ingénieur civil en informatique (15 credits)*

Cette variante est également destinée aux étudiants inscrit dans un autre programme de bachelier que FSA 1BA

LMECA1901	Continuum mechanics.	Philippe Chatelain, Emilie Marchandise	30h+30h	5 Credits	1q		x
LMECA1100	Deformable solid mechanics.	Issam Doghri	30h+30h	5 Credits	2q		x
LMECA1321	Fluid mechanics and transfer phenomena.	Vincent Legat, Grégoire Winckelmans	30h+30h	5 Credits	2q		x

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