le cnam

International Master - MR15101A

Structural Mechanics and Coupled Systems

- Language of instruction: English;
- Mode of learning: daytime, full time, on-site and remote classes;
- Length: M1: 1 year, M2: 1 year, M1+M2: 2 years;
- Official title appearing in the degree: «Master Sciences, technologies, santé - mention Mécanique», meaning Master of Science, Technologies and Health - track in Mechanics;
- French Ministry habilitation: Arrêté du 28 janvier 2019, ministère de l'Enseignement supérieur, de la Recherche et de l'Innovation.

Program's presentation

This Master program takes place at Conservatoire national des arts et métiers (Cnam), Paris downtown, France, in the heart of the Ville Lumière (the City of Light), Marais district, in a vibrant multi-cultural international and stimulating environment. Recognized by the French Ministry of Higher Education and Research, the diploma is awarded upon successful completion of a specialized program of study and opens the way to a professional career in an intercultural context or to further education towards the doctoral thesis.
The Program's faculty body include world-class academics and industry experts. Most of the lecturers of the program are members of the Structural Mechanics and Coupled Systems laboratory (www.lmssc.cnam.fr/en), whose expertise is internationally recognized in the following fields:

- Linear and non-linear structural dynamics;
- Fluid-structure interaction and vibro-acoustics;
- Smart structures and interfaces;
- Source identification and noise control.

Objectives and Skills Learned

- To provide the best references of the industrial and academic state of the art to those, who work in the fields related to structural engineering in the context of multidisciplinary design;
- To develop communication skills between individuals and teams in the context of the company and its organization in order to understand social relations within the company and to apprehend the intercultural dimension of relations in the professional environment;
- To raise awareness of the corporate culture of major French groups and the project management methods in force to integrate this know-how into project management.

Admission requirements

International, European and French students willing to pursue a Master degree program in English, and possessing a Bachelor-level degree in one of following fields: Mechanical Engineering, Civil and Structural Engineering, Engineering Design, Mechatronics.
Admission is also possible at the M2 (2nd year level) if you can justify 4 years of study in one of the fields mentioned above with equivalent M1 (1st year) courses.

Application:

- 2-page curriculum vitae (CV);
- copy of Bachelor degree, and Master degree (if any);
- transcripts of grades of all previous degrees;
- signed motivation letter indicating if asking admission at the M1 or M2 level, and asking for scholarship;
- English certificate equivalent to B1 for M1 (1st year), B2 for M2 (2nd year), according to the CEFRL (Common European Framework of Reference for Languages); contact details (email, telephone, address) of two reference professors.

Students coming from outside the European Union have to apply via Campus France (https://www.campusfrance.org). Other students have to apply by email to the master coordinator.

Career opportunities

This Master offers possibilities to start a career in line with the changing world of mechanics in the broad sense. Indeed, the wide use of composite materials in transportation industry associated to performance and dependability demands require the design of innovative mechanical structures of increasing complexity. Emerging problems in the field of mechanics (e.g. vibration control, fluid-structure interaction, structural optimization) require multidisciplinary approaches to develop test scenarii and ensure the reliability of structures designed and validated in a numerical environment.

International Master Structural Mechanics and Coupled Systems		
Code UE	Courses	Credits
Master 1 (60 ECTS)		
-	Applied Mathematics	4
-	Numerical Methods in Engineering	6
-	Mechanical Analysis and Design	6
-	Continuum Mechanics	6
-	Vibrations	6
-	Finite Element Method	6
-	Composite Structures	6
-	French as foreign language	6
-	English	6
-	Engineer Job	4
-	Company Organisation and Sustainability	4
Master 2 (60 ECTS)		
-	Structural Optimization	4
-	Smart Structures	4
-	Structural Dynamics	6
-	Fluid-Structure Interaction	6
-	Nonlinear Mechanics	6
-	Scientific Communication	1
-	French as Foreign Language	6
-	English	6
-	Internship	21

Calendar
- Registration: till end of June;
- Visa: till end of July;
- Arrival: till end of September;
- Start of classes: October;
- End of classes: June.

Fees
6 000 € per year
Your employer or a sponsoring company can cover the registration fees.
Scholarships covering tuition fees and/or living expenses can be attributed to outstanding students.

Corporate partners/ employers (examples)
- Safran
- Airbus
- Thales
- Naval Group
- Ariane Group
- PSA
- Valeo

www.lmssc.cnam.fr/en

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