

Advanced in solid mechanics

Master Mécanique



Durée
2 ans



Composante
Faculté des
sciences et
technologies



**Langue(s)
d'enseignement**
Anglais

Présentation

Solid mechanics studies the behavior of solid materials, and in particular, their motion and deformation under the action of forces, temperature changes, phase changes, and other external or internal agents.

Solids manifest themselves through a wide range of applications, like Manufacturing (material innovation, additive manufacturing), Civil engineering structures, Transport (air, land, space), Health (biomechanics, pharmaceuticals), Environment (contamination, sustainable development), Energy (mainly renewable energies), Food industry (processing methods).

Thus, solid mechanics is fundamental for mechanical, civil, aerospace, nuclear, and biomedical engineering, for geology, and for many branches of physics, such as materials science. Given the significant increase in knowledge in all these fields today, there is a need for highly qualified managers and engineers with advanced skills in solid mechanics.

Savoir-faire et compétences

The **European Master in Advanced Solid Mechanics (STRAINS)** focuses on modelling (theoretical, numerical or experimental), from conceptualization to realization, based on high-level scientific theories, of cutting-edge experimentation, increasingly resting on imaging and intensive use of high-performance computing.

It paves the way to access both the job market, through early and frequent exposure to the world of industry thanks to the network of industrial partners, and doctoral studies, through

a total immersion in the codes, atmosphere and methods of international research

Formation internationale : Doubles diplômes, diplômes conjoints, Erasmus Mundus

Les + de la formation

A very flexible mobility scheme

The University of Lille, Centrale Lille (France), the National Technical University of Athens (Greece), the Université catholique de Louvain (Belgium), Wrocław University of Science and Technology (Poland) and the University of Calabria (Cosenza, Italy) offer a unique joint Master's programme in Advanced Solid Mechanics, a 2-year course in English, designed for students wishing to develop their knowledge and skills in materials and structure modeling.

Organisation

Organisation

The master's programme is presented at :  <https://www.master-strains.eu/programme>

Admission

Conditions d'admission

Application : European platform  <http://school-education.ec.europa.eu/en>

Et après

Poursuite d'études

After completing this master's degree, the student can continue his studies with a PhD.

Insertion professionnelle

R&D engineer, researcher

Pour en savoir plus sur l'insertion professionnelle des diplômés de l'Université de Lille, consultez les répertoires d'emplois publiés par l' [ODiF \(Observatoire de la Direction des Formations\)](#)

Les fiches emploi/métier du  [Répertoire Opérationnel des Métiers et des Emplois \(ROME\)](#) permettent de mieux connaître les métiers et les compétences qui y sont associées.

Infos pratiques

Autres contacts

Contact administratif et pédagogique :

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Lieu(x)

 Villeneuve d'Ascq

Campus

 Campus Cité scientifique

En savoir plus

Faculté des Sciences et Technologies - FST

 <https://sciences-technologies.univ-lille.fr/>