

## Parcours EUR Mécanique des solides

ECTS  
**120 crédits**

Durée  
**2 ans**

Composante  
**Sciences Fondamentales  
et Appliquées**

### Présentation

This training aims to train operational engineers for the mechanical engineering jobs with an important opening towards technological innovation. At the end of this training, the students will have acquired a set of knowledge and skills enabling them to understand a broad field of fundamental and applied sciences: mechanics, mechanical engineering, materials, structural calculations, vibration, applied mathematics, scientific computing, signal and image processing.

Beyond this purely scientific and technical knowledge, they will learn the engineer's methods and tools for experimentation: modelling, innovation, the analysis and design of mechanical products and systems.

**The Master's courses are mainly in French. The Common courses are mainly in English**

The Master's courses take place on the Futuroscope-campus. Some Common courses may occur on the East-campus of Poitiers.

**are taught Some of common courses could be teach at the East-Campus of Poitiers**

### Conditions d'admission

- **Candidater à l'entrée en première année sur le site # [monmaster.gouv.fr](https://monmaster.gouv.fr)**
- **Pour les candidats non européens dont le pays de résidence est couvert par le dispositif Études en France : consulter le # site [Campus France](#).**

### Infos pratiques

#### Lieu(x)

# Futuroscope

### Admission



## En savoir plus

Candidatures accès M1 : Vous devez faire acte de candidature sur la plateforme "Mon master"

# <https://www.monmaster.gouv.fr>

Candidatures Campus France : consulter le calendrier sur la plateforme

# <https://www.campusfrance.org/fr>

Learn more about Poitiers Graduate School EUR INTREE

# <https://eur-intree.univ-poitiers.fr/master-program/>

# Programme

Mode full (title / type / CM / TD / TP / credits)

## M1 EUR Mécanique des solides

### Semestre 1

|                                       | Nature | CM  | TD  | TP | Crédits    |
|---------------------------------------|--------|-----|-----|----|------------|
| Common courses 1 EUR INTREE           | UE     | 32h |     |    | 3 crédits  |
| Interaction rayonnement-matière       | EC     | 8h  |     |    |            |
| Interaction électrons-matière         | EC     | 8h  |     |    |            |
| Surface chemistry                     | EC     | 8h  |     |    |            |
| Outils numériques - programmation 1   | EC     | 8h  |     |    |            |
| Soft skills 1 - EUR INTREE            | UE     |     |     |    | 3 crédits  |
| Anglais                               | EC     |     | 22h |    |            |
| Scientific communication              | EC     | 8h  |     |    |            |
| Research project                      | UE     |     | 10h |    | 12 crédits |
| Couplage expérimentation/modélisation | UE     |     |     |    | 6 crédits  |
| Couplage expérimentation/modélisation | EC     | 14h | 22h |    |            |
| Matériaux et applications             | UE     |     |     |    | 3 crédits  |
| Matériaux et applications             | EC     | 6h  | 14h |    |            |
| Transmission de puissance             | UE     |     |     |    | 3 crédits  |
| Transmission de puissance             | EC     | 14h | 18h |    |            |

### Semestre 2

|                                                                           | Nature | CM  | TD  | TP | Crédits    |
|---------------------------------------------------------------------------|--------|-----|-----|----|------------|
| Common courses 2 EUR INTREE                                               | UE     | 32h |     |    | 3 crédits  |
| Electrical phenomena at interfaces                                        | EC     | 8h  |     |    |            |
| Surfaces topography and its effect on interactions with fluids and solids | EC     | 8h  |     |    |            |
| Surface and interface design for heterogeneous catalysis                  | EC     | 8h  |     |    |            |
| Spectroscopy at interfaces                                                | EC     | 8h  |     |    |            |
| Soft skills 2 - EUR INTREE                                                | UE     | 8h  | 12h |    | 3 crédits  |
| Management                                                                | EC     |     | 12h |    |            |
| Environmental impact                                                      | EC     | 8h  |     |    |            |
| Internship S2                                                             | UE     |     |     |    | 12 crédits |
| Vibrations et durabilité                                                  | UE     |     |     |    | 6 crédits  |
| Vibrations et durabilité                                                  | EC     | 16h | 20h |    |            |

|                                                      |    |     |     |           |
|------------------------------------------------------|----|-----|-----|-----------|
| Tribologie                                           | UE |     |     | 3 crédits |
| Tribologie                                           | EC | 10h | 14h |           |
| Techniques d'identification en mécanique des solides | UE |     |     | 3 crédits |
| Techniques d'identification en mécanique des solides | EC | 8h  | 12h |           |

## M2 EUR Mécanique des solides

### Semestre 3

|                                                    | Nature | CM  | TD  | TP  | Crédits   |
|----------------------------------------------------|--------|-----|-----|-----|-----------|
| Métrologie optique                                 | UE     |     |     |     | 6 crédits |
| Métrologie optique                                 | EC     | 10h | 8h  |     |           |
| Lubrification et dynamique des machines tournantes | UE     |     |     |     | 6 crédits |
| Lubrification et dynamique des machines tournantes | EC     | 18h | 20h |     |           |
| Common courses 3 EUR INTREE                        | UE     | 32h |     |     | 3 crédits |
| Modélisation moléculaire                           | EC     | 8h  |     |     |           |
| Introduction to rheology                           | EC     | 8h  |     |     |           |
| Contact réseaux poreux                             | EC     | 8h  |     |     |           |
| Outils numériques - Programmation 2                | EC     | 8h  |     |     |           |
| Soft skills 3 - EUR INTREE                         | UE     | 8h  | 22h |     | 3 crédits |
| Anglais                                            | EC     |     | 22h |     |           |
| Soft skills 3                                      | EC     | 8h  |     |     |           |
| Practicum                                          | UE     |     | 10h |     | 6 crédits |
| Practicum - EC                                     | EC     |     | 10h |     |           |
| Management de l'innovation                         | UE     |     | 8h  | 24h | 6 crédits |
| Management de l'innovation                         | EC     |     | 8h  | 24h |           |

### Semestre 4

|               | Nature | CM | TD | TP | Crédits    |
|---------------|--------|----|----|----|------------|
| Internship S4 | UE     |    |    |    | 30 crédits |

UE = Unité d'enseignement

EC = Élément Constitutif