



MASTER'S DEGREE
PROGRAMME // M2



CENTRALELYON
ENISE



MECHANICAL ENGINEERING

Biomechanics



MASTER IN MECHANICAL ENGINEERING

Biomechanics



2 semesters taught in French, including 4 months of internship in co-accreditation with École Centrale de Lyon and Université de Lyon 1

Description

The biomechanics track in the Mechanics specialization combines engineering and life sciences.

Objectives

This specialization provides an in-depth scientific grounding in the analysis and modeling of living tissues. The courses have a wide range of applications: biomaterials and their involvement in human repair, diagnostics of living tissue integrity, aging of human tissues and sensory systems, sensory cells and neuroscience, perceptual engineering, metrology of perception and emotions, application to design, diagnostic methods for the decline in perceptual acuity in certain neurodegenerative pathologies.



COMMON COURSES*

12 ECTS



Finite element method in mechanics



Modeling in mechanics of materials

SPECIALIZATION COURSES*

12 ECTS



Tribology of living matter



Bioengineering



*Bio-materials
Anatomy and Surgery*

OPENING COURSES*

6 ECTS



Additive manufacturing

COMPLEMENTARY COURSES*

9 ECTS



English for business communication level 2



Socio-economics of business



*Internship preparation.
Bibliography*

INTERNSHIP*

21 ECTS



Minimum 16 weeks



Written report



Oral presentation

* All the courses are taught **exclusively in French**