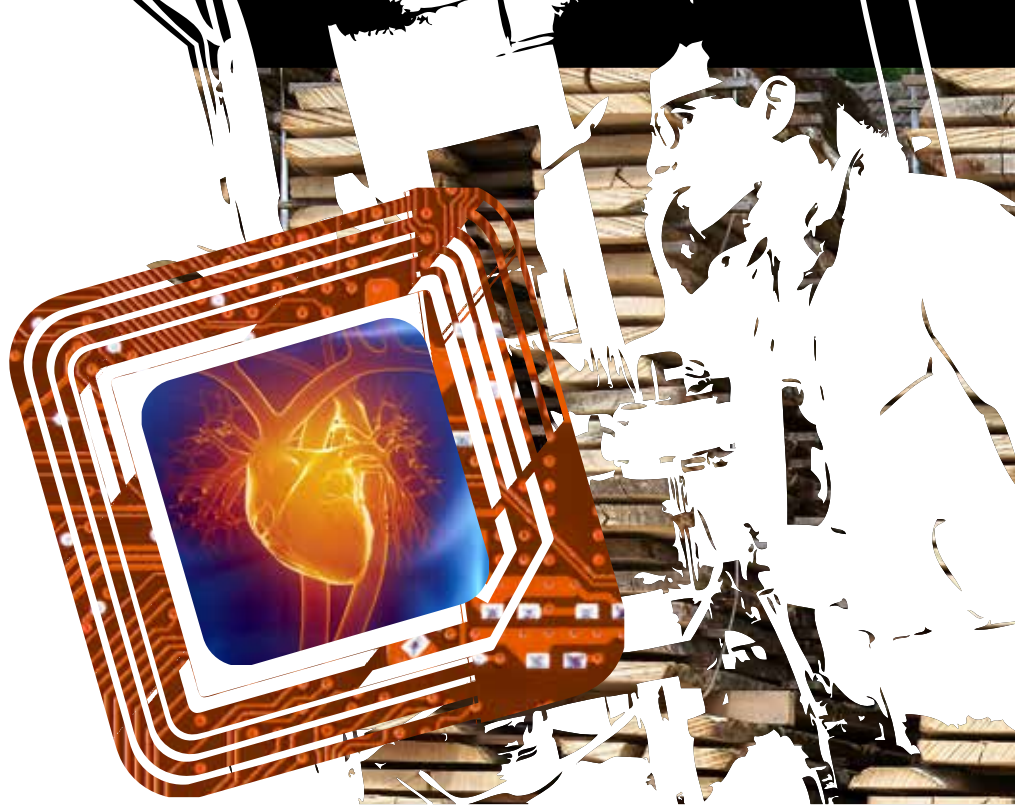




MI



The Mechanical Engineering and Interactive Design (MI) specialization is a Master's-level program that trains generalist engineers to handle cross-functional issues related to mechanics, multi-functional materials, automation, and life sciences.

KEYWORDS

- BIOMECHATRONICS
- STRUCTURAL CALCULATION
- MCAD / MCAE
- MECHANICAL DESIGN
- MECHANICS – ROBOTICS
- DIGITAL SIMULATION
- COUPLED MECHANICAL SYSTEM
- SIMULATION
- BIOCOMPATIBLE SYSTEMS

ALL POLYTECH PROGRAMS LEVERAGE A SOLID PARTNERSHIP NETWORK WITH:

- The industrial world (800 internships, 200 industry projects, and 50 apprenticeship contracts per year)
- Academic research (14 associated research laboratories)
- International partners (over 100 partner universities around the world)

BIOMECHATRONICS

Interactive design is illustrated through two rapidly growing fields of application: mechatronics and bio-design.

MI TEACHING STAFF

Research-professors working at internationally recognized research laboratories: I3M, LIRMM, and LMGC.

TARGET PROFESSIONS

When MI engineering students graduate:

- they master the scientific and technical tools related to the mechanics of materials, structures, and systems.
- they know the main tools for optimizing complex systems.
- they have strong working knowledge of mechanical computer aided-design (MCAD) and digital simulation software.
- they know how to integrate various types of constraints (ecological, biological...) starting from product design.

Graduates are qualified for many jobs:

- R&D Engineer
- Engineering Firm Engineer
- Project Manager
- Product Manager
- Business Engineer
- Company Founder

TARGET ACTIVITY SECTORS

- Mechanical industries: construction, transport, aerospace...
- R&D centers, mechanics departments in large companies.
- Development and industrialization of multi-functional materials.
- Production centers: process optimization.
- Medical and paramedical industries.
- Local government, specialized organizations, auditing activities.
- Teaching and public-sector research.

MAIN PROGRAM TOPICS

- mathematics
- structural and fluid mechanics
- modeling
- materials
- digital simulation
- eco-design
- robotics / medical robotics
- computer science
- human and social sciences
- modern languages

A complete list of courses offered at POLYTECH, and total hours, is available on www.polytech-montpellier.fr

PROJECTS AND INTERSHIPS

Engineering students participate in several internships with companies or research laboratories:

- 1 month internship at the end of the 3rd year
- 3-4 months internship at the end of the 4th year
- 5-6 months internship at the end of the 5th year

5th year students perform an industry project at the end of their studies (300 hours), which places them in a professional context and helps establish their independence.

It is possible for students to take their 5th year abroad in order to obtain a dual degree (Universities of Cranfield, Kaiserslautern...).

"MI" GRADUATES

Benjamin Ousset, Structural Calculation Engineer, Areva TA (MI 2012)

Paco Poche, Product Life Cycle Management Consultant, Accenture Germany (MI 2013)

ADMISSION

3rd year

- For students in preparatory classes at higher education establishments: recruitment via Polytech competition.
- For holders of L2, L3, DUT, BTS, or equivalent foreign diploma: competition via written application and interview.
- For PeiP2 students (Polytech engineering schools program): after curriculum validation and national ranking.

4th year

For holders of an M1 degree or equivalent foreign degree: competition via written application and interview.

Vocational contracts

Students accepted to initial education may complete their 5th year with a vocational contract.

Continued education

The Mechanical Engineering and Interactions program is also available as continued education under some conditions, for employees who can demonstrate at least three years of professional experience related to this specialization.

www.polytech-admission.org

SIGNIFICANT TECHNICAL RESOURCES

Since it was created in 2009, the program has invested significantly for resources in two complementary areas:

- *scientific and multi-physics calculation*
- *rapid prototyping and additive manufacturing (3D printing)*

The MI specialization offers its students a continuous series of tools enabling them to cover everything from design to creation of innovative systems and products.

Photos: Groupe Archimède - Camille Boulicault for Campus Communication; Shutterstock. Design and illustration: Atelier de signes.

TO FIND OUT MORE +

More information regarding the number of ECTS, course descriptions, research partnerships, and international opportunities on: www.polytech-montpellier.fr.



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