



## **CONTACTS**

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## **MECHANICAL ENGINEERING**

Politecnico di Bari

**MASTER DEGREE POLIBA** 



**Master Degree Mechanical Engineering** 



orientami.poliba.it









## **EDUCATIONAL OBJECTIVES**



## **Site**Politecnico di Bari.



## **Course duration** 2 years.



## **Language** English.



#### Admission

Free admission upon verification of curricular requirements.

Students of the Master of Science in Mechanical Engineering at the Politecnico di Bari can choose between three specializations:

- "Mechanics", which provides students with the most advanced tools to tackle cutting-edge technological applications of mechanical engineering: micromachines, complex mechanical systems, collaborative and swarm robots, complex flows for space and bio applications, and advanced materials.
- "Industry", which provides in-depth preparation in the areas of industrial production, virtual and augmented reality, management of complex systems and enterprises, energy and environmental sustainability of production and enterprises.
- "Mechatronics and Robotics", which provides students with an interdisciplinary preparation in mechanics, control theory, advanced sensors, smart materials, software, and robotics, offering an exciting field of engineering for novel applications, research, and creative and entrepreneurial initiatives.



## THE SKILLS



All courses are taught in English.

The training project is structured as follows.

Lectures on basic disciplines as well as on mechanical engineering are provided at the first year (analytical mechanics, mathematical methods for engineering, physics and chemistry, machine mechanics, production technologies, energy systems and machines, design and management of industrial systems).

From the second year onwards, modules become specific to the specialization chosen (fluid dynamics, modelling and controls, internet of things, electrical machines, science and materials technology, electronics). Moreover, a wide offer of elective courses may be chosen by students to adapt the training to their specific needs.

The structure of the course is designed to create synergies with academic world and the regional, national and international industries, corporation and research institutions.

Visiting professor and professionals from multinational corporations will also teach, bringing their real-world experience to our students.

### **SPECIALIZATIONS**

#### **Mandatory Courses**

- Advanced Manufacturing Processes
- Advanced Mechanical Design
- Analytical And Statistical Methods For Engineering
- Clean Energy Systems and Fluid Machinery
- Electrical Drives For Industrial Applications
- Fundamentals of Internet of Things
- Measurement Technology and Sensors
- Mechanical Systems Dynamics
- Design and Management of Industrial Systems
- Management of Complex Systems
- Virtual Prototyping

# PROFESSIONAL OPPORTUNITIES

Graduates in Mechanical Engineering will be able to be employed in the industrial mechanical area: research and development, product design and development, tooling, automation technology, production system and machine design. The course provides students with the tools to pursue a career as a consultant or to work in manufacturing, mechanical and mechatronic companies, in energy production and conversion, automation, robotics or in the civil service. Our graduates design and produce tools, engines, machines and other mechanical equipment.

The Master Degree Course enables a graduate to be admitted to the exam prescribed by the Italian Laws to become a professional (senior) engineer for the industrial sector.



# FOLLOW-UP TRAINING



At the end of the master's program, the graduate will be able to access, according to the current legislation, the Research Doctorate and the second level University Masters, by passing an official exam.