

University Bachelor of Technology (B.U.T.)

# Mechanical & Manufacturing Engineering (GMP)

The **B.U.T. GMP** trains mechanical engineering industry technicians who are able to work in diverse business sectors to ensure the commercialisation of new products through the first three phases of their life cycle: the design phase during which the product is defined, the industrial phase where manufacturing and assembly processes are developed, and finally the operational management phase where production and assembly lines are managed and optimised. Such versatility enables graduates to better adapt to changing corporate requirements and to the professions of tomorrow. They are involved in the engineering process, from the definition of customer needs to the implementation of technological solutions which comply with deadlines as well as cost and quality constraints.

B.U.T. GMP graduates work as industry consultants or proximity design, manufacturing, or operations managers. For the three positions, they are required to implement problem-solving and continuous improvement techniques in the mechanical engineering field and work alongside a host of industry stakeholders.

## Skills

The course aims to develop 4 core skills required by industry in three professional situations: product design, product manufacturing and operations management.

The common core skills include:

- Defining and specifying: determining the best technical and economic requirements and solutions based on the client's needs
- Developing: determining optimal design solutions
- Manufacturing: implementing the chosen technical solutions
- Operating: managing product life cycles and manufacturing processes

An additional fifth skill is linked to the study track chosen.

## Study tracks

From year 2, students choose a study track which enables them to acquire an additional fifth skill. The latter provides the opportunity to gain in-depth knowledge in a more specialised field or to move into a new field related to mechanical engineering. There are five different study tracks (depending on the IUT).

- The **Innovation for Industry study track** aims to train general technicians in the field of mechanical engineering to have expertise in creative tools and techniques, further innovation and understand industrial property rights.

### Career prospects:

Pre-project R&D assistant, assistant designer, industrial property rights assistant, technology monitoring assistant

- The **Digital simulation and virtual reality study track** aims to train mechanical engineering technicians with additional preparation on the implementation of digital tools for advanced simulation, from virtual and augmented reality through to digital twin.

### Career prospects:

R&D assistant, digital designer-modeller, process simulation technician, production systems simulation assistant

- The **Operations process management study track** aims to train general technicians in the field of mechanical engineering with additional training in workforce management, to act as the interface between different corporate departments throughout the product's lifecycle.

### Career prospects:

Project manager, team leader, production manager, (workstation, line, workshop, plant, etc.), quality department manager

- The **Sustainable design and manufacturing study track** aims to train general technicians in the field of mechanical engineering to have awareness and expertise on environmental issues in industry.

### Career prospects:

Environment manager, sustainable development manager, change manager, environmental and regulatory affairs manager, eco-designer, environmental and circular economy monitoring assistant

- The **Industrial business manager study track** aims to train general technicians in the field of mechanical engineering with additional training in marketing and sales management.

### Career prospects:

Technical business manager, bespoke technical solutions sales manager, starting a new company or acquiring an existing firm

## Entry requirements

The B.U.T. GMP is open to high school graduates from **general or technological backgrounds** or to those changing study path.

Admission is based upon examination of academic records. When considering applications, some departments might require an interview. The B.U.T. can also be prepared within the Lifelong education scheme or on a vocational basis (apprenticeship training or work-based learning). The diploma can also be delivered on Accreditation of Prior Experiential Learning (APEL).

# B.U.T. Mechanical & Manufacturing Engineering in France

