



PARIS-CACHAN CAMPUS



MAJOR

Engineering Management

#INDUSTRIALENGINEERING #FACTORY4.0 #REINDUSTRIALISATION
#SUSTAINABLELOGISTICS #DIGITALISATION #ITSYSTEMSMANAGEMENT
#DEVICESHADOWS #DESIGNMANAGEMENT
#SUSTAINABLEINNOVATION #PROOFOFCONCEPT #CO-DESIGN



ENGINEERING SCHOOL
Creating the future together



COURSE OBJECTIVES

Our Engineering Management Major will allow you to develop the engineering expertise to accompany the transformations conducted by industrial organisations. These transformations, which reflect both global and local societal challenges, require engineers equipped with technical, organizational, and creative skills.

COURSE DESCRIPTION

The Engineering Management Major spans over **two academic years structured around two academic semesters** and two semesters of internships: a student-engineer internship in Year 4 and a 'final year project' internship in Year 5. **In Year 5, you will be able to choose between 2 specialist tracks:**






- ▶ **Reindustrialisation and sustainable logistics** (production and logistics management).
- ▶ **Digitalisation** (information systems management and data analysis for industrial performance).

We also offer students the possibility of studying abroad for a semester at one of our many partner universities (e.g., University of Modena and Reggio in Italy, Hochschule München in Germany, Universidad Carlos III and Universidad Pontificia Comillas in Spain). **You can also benefit from an exciting dual degree programme with Hochschule Karlsruhe (Germany).**


YEAR 4 . COMPULSORY MODULES

Engineering Management Basics 	80 hours 8 ECTS
<ul style="list-style-type: none">· Inferential Statistics· Operational Research I· Design Theory for Innovation· Project Management· Professional English	Master the fundamental formalisms used by engineering companies to innovate and optimize industrial performance.
Information System & Data Management 	64 hours 5 ECTS
<ul style="list-style-type: none">· IT governance· Data processing· Data Management· IoT & Big Data	Understand the role and challenges of an enterprise information system. Develop a command of basic data analysis tools.
Production and Supply Chain Management 	64 hours 5 ECTS
<ul style="list-style-type: none">· Manufacturing processes· Lean management· Supply chain basics	Acquire a broad industrial culture. Understand the challenges of contemporary production systems.
Knowledge and Design Management 	64 hours 5 ECTS
<ul style="list-style-type: none">· Design Thinking· Knowledge Management· Patenting for Innovation	Master the tools and methods needed to improve corporate social and environmental performance.
Performance Driven Company 	64 hours 5 ECTS
<ul style="list-style-type: none">· Corporate Finance· Cost Driver· ERP for digital transformation· Business Game	Understand the main tools for financial analysis of industrial performance and the impact of their implementation in organizations.
Group Project 	120 hours 5 ECTS
<ul style="list-style-type: none">· Preliminary design and location study for a new industrial production site.	Demonstrate the ability to employ engineering skills to identify and solve an industrial problem.
Engineering student internship	


YEAR 5 . COMPULSORY MODULES + 1 OPTIONAL TRACK

Fundamentals of Organizations 	50 hours 4 ECTS
<ul style="list-style-type: none">· Business Contract· Droit du travail· Business Transformation & Change Management	Understand the organizational and legal environment in which engineers work.
Business Strategy 	50 hours 4 ECTS
<ul style="list-style-type: none">· Business strategy / Business Model Canvas· Financial plan & valuation	Master strategic analysis methods and understand the impact of their implementation in organizations.
Data Driven Industrial Performance 	64 hours 5 ECTS
<ul style="list-style-type: none">· Data Analysis· Operational Research II· Industrial Performance Management	Master the theoretical foundations of industrial optimization methods.
Economic, Social and Environmental Performance 	50 hours 4 ECTS
<ul style="list-style-type: none">· Biomimicry· RSE· Conferences	Master the tools and methods needed to improve corporate social and environmental performance.
Engineering project 	150 hours 5 ECTS
Final Project Internship	

. TRACK 1

Industry and Supply Chain 	100 hours 8 ECTS
<ul style="list-style-type: none">· Production management· Industrialization· Enterprise Resource Planning (ERP)· Supply chain performance and efficiency· Project management	Master tools for improving industrial performance. Understand the and challenges of reindustrialization, relocation and Industry 4.0.

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IT as a decision tool 	100 hours 8 ECTS
<ul style="list-style-type: none">· Artificial intelligence and data science· Advanced data analysis· Business intelligence· Blockchain· IT project risk issues and cybersecurity	Master the contemporary tools of data analysis and artificial intelligence. Understand the technical, organizational and societal issues related to the digitization of industrial activities.

YOUR FUTURE AFTER THE ENGINEERING MANAGEMENT MAJOR:

The Engineering Management major offers you career opportunities across sectors of activity in which major listed industrial groups as well as small and medium-sized companies operate.

MANAGING 21ST CENTURY ENGINEERING ACTIVITIES

The major prepares students for roles in engineering management (design offices, production/logistics, information systems), that are key to the successful management of contemporary transformations. As a result, students can aspire to graduate careers in all industrial sectors.

JOBS OF THE FUTURE

Re-industrialization sustainable logistics

- Logistics site manager
- Internal logistics process manager
- Production team leader
- Methods engineer

Digitalization

- Information systems transformation consultant
- Dematerialization and digital transition consultant
- Data analyst
- Product owner

Responsible design

- New product development project manager
- Eco-design manager
- Innovation management consultant
- Innovation project leader

REAL-WORLD PROJECTS TO DEVELOP YOUR EMPLOYABILITY

During the Major, you will be asked to carry out projects related to real-world business issues.

- ▶ **Year 4** - preliminary study of the design and location of a new industrial production site.
- ▶ **Year 5** - development of a proof of concept (POC) to determine the viability of an innovation project for an industrial partner (e.g., automation of a production line for eco-responsible sports equipment, development of a cooperation mechanism to establish a low-carbon trajectory for airliners, development of a tool to measure the carbon emissions of a logistics unit).





Alexis TOURTET

2022 Graduate

“ The Major in Engineering Management has provided me with professional experience along with technical and managerial knowledge gained through truly empowering company projects. **These projects are enlightening from an academic, technical, organizational and human perspective.**

I'm happy to have chosen EPF after completing my preparatory class in France: The school and more precisely the major fit perfectly with my ambition to pursue a technical and analytical approach while developing a managerial and entrepreneurial aspect.

As an Engineering Management graduate, you're able to follow the career path that most appeals to you, whether it be in Digital, Consulting, Analysis, Exntrepreneurship, Project Management or Environment fields...

The world is your oyster! 🐚

PRATICAL DETAILS

- **Duration of studies:** 2 years
- **Location:** Paris-Cachan Campus

ANY QUESTIONS ?

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