





# EACH NEW PORTUNITIES

# JOIN OUR ENGLISH TRACKS AT IMT MINES ALBI! A leading graduate engineering school in France



### ACCESSIBILITY

- Chance to follow programs without needing to speak the local language
- English materials for everyone



#### INTEGRATION INTO THE LABOUR MARKET

- English, a major asset in a globalized business world
- Programs to help design a more energyefficient industry and society.

## INTERCULTURAL SKILLS

- A multicultural environment with students from all over the world
- FLE (French as a foreign language) courses and French acculturation

r	LEADING ENGINEERING
	LEADING ENGINEERING SCHOOL

 A school from IMT, the number-one group of graduate schools in France of engineering and management

# **4 AVAILABLE PROGRAMS** FOR A MORE RESPONSIBLE WORLD

Available on the first semester of the master 2, the english tracks give up to 30 credits to international students. You then have the possiblity of continuing into the second semester with an internship. The language of courses is English. We can also use an AI-based instant translation tool (the result of research carried out at school).

#### You select the teaching units offered, based on the school's 4 options:



#### Renewable energies, sustainable production and construction

Sharpen your skills in the field of **renewable energy** systems, from production to distribution, including integration at different scales: buildings, cities, regions and industries.

Advanced materials and processes for tomorrow's transportation

Develop high-performance materials solutions and associated processes, in response to the key challenges facing companies and industries of the future: aeronautics, automotive, aerospace, rail...



#### Industrial engineering for organizations' performance

Meet the logistics challenges of organizations in all sectors, by optimizing the performance of physical and information flow management systems.



Develop an industrial culture and skills in these sectors through the study of manufacturing and business processes, taking into account the specific and evolving constraints of these industries.

NOMINATION BY YOUR ESTABLISHMENT BEFORE MAY 1 AT

for-mobiliteac@mines-albi.fr

Rhetorical and technical debate /				
professionalisation				

2 ECTS

#### P **RENEWABLE ENERGIES, SUSTAINABLE PRODUCTION AND CONSTRUCTION**

4 teaching units	Program	Credits
Renewable energies, sustainable production and construction	<ul> <li>Energy economics and energy transition issues</li> <li>Solar energy: electricity and heat production</li> <li>Cooling thermodynamics and radiative heat transfer</li> </ul>	6 ECTS
Conversion	<ul> <li>Tools for renewable energies integration</li> <li>High-power wind and solar energy converters</li> <li>Hydrogen value chain and smart grids</li> </ul>	6 ECTS
Distribution	<ul> <li>CO<sub>2</sub> Capture, transportation, Storage and Usage</li> <li>Engine thermodynamic cycle and Pinch analysis</li> <li>Energy storage and control</li> </ul>	6 ECTS
Production	<ul> <li>Turbulent flows with or without chemical reaction</li> <li>Renewable gases and biofuels</li> <li>Biomass, wastes, pollutants projects</li> <li>Simulation of flows and transport phenomena</li> </ul>	8 ECTS

#### H ADVANCED MATERIALS AND PROCESSES FOR TOMORROW'S TRANSPORTATION

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3 teaching units	Program	Credits		
Advanced materials and processes for tomorrow's transportation	<ul> <li>AI applied to processes and materials</li> <li>Plates and anisotropic laminates</li> <li>Aeronautical techniques</li> <li>Aeronautical techniques projects</li> </ul>	8 ECTS		
Project	- Research project	12 ECTS		
Behaviour and implementation of metallic materials	- Surface engineering - Damage and failure modes - From mechanical tests to numerical modelling	6 ECTS		

# INDUSTRIAL ENGINEERING FOR ORGANIZATIONS' PERFORMANCE

5 teaching units	Program	Credits
Thematic opening and professionalisation	<ul> <li>Contract management and team management</li> <li>Thematic opening: Industry 4.0 and industrial performance</li> </ul>	4 ECTS
Management of company resources and flows	<ul> <li>Supply Chain management</li> <li>ERP and company information systems</li> </ul>	4 ECTS
Project management	<ul> <li>Collaborative Design and PLM (Product Lifecycle Management)</li> <li>Agile project management</li> <li>Advanced project management</li> </ul>	6 ECTS
Supply Chain	<ul> <li>Supply Chain engineering</li> <li>Purchasing and supply management</li> <li>Management by process and performance</li> <li>Advanced process simulation</li> </ul>	8 ECTS
Industrial project	- Industrial project development	4 ECTS

#### PHARMACEUTICAL, AGRIFOOD AND COSMETICS PROCESSES

5 teaching units	Program	Credits
Industrial environment	<ul> <li>Products and formulation</li> <li>Regulations and specificities of Pharma and Agro-food industries</li> <li>Industrial Projects Management</li> </ul>	6 ECTS
Chemistry and biotechnologies	<ul> <li>Green chemistry and multiphase reactors</li> <li>Biotechnological processes</li> </ul>	4 ECTS
Production of solid forms	- Generation of solids - Upstream operations - Downstream operations	6 ECTS
Scale-up and modelling	<ul> <li>Top-bottom engineering models</li> <li>Bottom top engineering models</li> <li>Scale-up of processes</li> </ul>	6 ETCS
Development pathway project	- Research Initiation Project	4 ECTS

Follow us



#### IMT MINES ALBI

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