



ADPHARMING

Advanced Pharmaceutical Engineering

The fast growing Pharmerging markets will be represent 50% of the global pharmaceutical market in 2020, with an annual growth of 15% a year. Most pharmaceutical industries will have to increase their production and supply chain, in accordance with the international regulations, and to develop new dosage forms, according to the best world standards.

ADPHARMING course offers challenging opportunities for students interested in developing a career in the pharmaceutical industry. ADPHARMING aims at developing a new kind of leader with a global high-level training for R & D, drug production, quality management, lean management, logistics and supply chain, in the field of pharmaceuticals, cosmetics, biotechnology...

Competencies acquired

- General knowledge of the world pharmaceutical industry
- An advanced knowledge of the applicable regulations and quality in the pharmaceutical field
- An in-depth knowledge of the drug life cycle
- The ability :
 - to use state of the art sciences, technology and regulatory aspects to conceive and develop innovative drugs and advanced galenics
 - to use project and lean management
 - to use lean management methods in the pharmaceutical and related fields
 - to undertake projects in an international team environment
 - to communicate with written reports and by oral presentation
- The chance to learn or improve French and acquire the French culture
- The opportunity to enter a high-level career in the pharmaceutical industry or to continue for the preparation of a doctoral thesis

Career opportunities

- R&D manager in advanced galenics
- Formulation project leader
- Quality system manager
- PAT project manager
- Pilot Plant manager
- Plant performance & process excellence manager
- Technology transfer manager/supervisor
- Auditor, Consultant or Expert in the field
- Production Planner, Production Analyst
- Deputy Head of Bioproduction
- Lean project manager or leader
- Supply chain manager
- QA – Supplied Materials manager

Admission requirements

Participants must hold a Bachelor of Science or an Engineering degree with related major [Chemical Engineering, Chemical Sciences, Pharmaceutical Engineering, Pharmaceutical Sciences, ...] or an equivalent degree.

Pharmacists with an industrial major are welcome as well as participants holding a first industrial experience.

Language requirements

English:

- Mother tongue or
- Study in an English-speaking country or
- English Language Qualification such as :
 - TOEFL IBT 80,
 - ELTS 6.0,
 - TOEIC 750,
 - Cambridge CAE (Certificate of Advanced English).

French:

A good knowledge of French is not mandatory before arrival in France, but TEF II or equivalent may be required to obtain a visa.

Calendar

One intake per year in September.

• **Year 1:** Two academic semesters in Mines Albi.

• **Year 2:** One academic semester in Mines Albi + 6 month Master thesis in industry and/or in a research lab.

Contact



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Syllabus

SEMESTER 1: Introduction, scientific and technological bases.

- Engineering ethics and Intercultural communication
- Linguistic integration
- Introduction to the pharmaceutical industry
- Fundamentals sciences for pharmacy
- Transport Phenomena and thermodynamics
- Bases of the pharmaceutical engineering
- Initiation to the corporate world, visits
- Generic tools for engineering
- Project 1: Bibliography and presentation

SEMESTER 2: Bases of pharmaceutical engineering, project and production management.

- Pharmaceutical engineering today
- Pharmaceutical engineering: process engineering, modeling
- Project management
- Production management
- Supply chain management
- Lean management
- Eco-design, circular economy, innovation
- Process instrumentation and control
- French culture and language
- Project 2: Research, modeling, industrial topics, innovation

SEMESTER 3: Advanced Pharmaceutical Engineering.

- Specificities of international pharmaceutical companies
- Regulatory agencies
- Good Manufacturing Practices
- Mechanism of drugs action
- QbD, PAT
- Green processes for pharmacy
- Pharmaceutical processes & development
- Pharmaceutical engineering: dosage forms, advanced and innovative galenics
- Quality management system, QRM
- Pharmaceutical environment (clean rooms...)
- French culture and language
- Project 3: Research and/or industry oriented

SEMESTER 4: MSc Thesis.

- 6-month MSc thesis in Industry and/or research lab (France or international)

This program is certified and promoted through the Toulouse Tech network.

Details of tuition fees can be found on our website



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