The fast growing Pharmerging markets will worth 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 agreement 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 leaders 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...

Competences 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 process engineering to design pharmaceutical processes in a sustainable way;
  - 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 the French language 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.

Typical jobs

- 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 Engineering degree with related major (Chemical Engineering, Chemical Sciences, Pharmaceutical Engineering, Pharmaceutical Sciences, …) or an equivalent degree. Participants holding a first industrial experience are also welcome.

Admission requirements

English:
- Mother tongue or
- Study in an English-speaking country or
- English Language Qualification such as:
  - TOEFL IBT 80,
  - IELTS 6.0,
  - OIEC 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 at Mines Albi.
- **Year 2**: One academic semester at Mines Albi + 6 month Master thesis in industry and/or in a research lab.

Cost

18,000 euros

Contact

Website: www.mines-albi.fr/adpharming
Contact email: admission.adpharming@mines-albi.fr

Tél. +33 5 63 49 33 49

Syllabus

**SEMESTER 1: Introduction, scientific and technological bases.**
- Cultural and linguistic integration
- Introduction to the pharmaceutical industry
- Fundamental sciences for pharmacy
- Transfer 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
- Control systems, captors
- French culture and langage
- 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 langage
- Project 3: Research and/or industry oriented

**SEMESTER 4: MSc Thesis.**
- 6-month MSc thesis in Industry and/or research lab (France or international).