



BIOMASS AND WASTE FOR ENERGY AND MATERIALS

Creating a less carbon-intensive world and tackling environmental challenges require highly qualified engineers with in-depth knowledge of technologies, practical ingenuity and creativity. The **MSc BIWEM** provides a state-of-the-art education in the fields of clean tech and sustainable management.

SKILLS ACQUIRED

- ✓ Understand, analyse and manage complex systems in an international environment
- ✓ Think green, preferably with a circular economy mind-set
- ✓ Use state of the art, sciences, technology, business model and regulatory aspects to conceive, design and develop processing routes
- ✓ Use experimental and numerical methods for process design, process optimization and assessment with a circular economy mind-set
- ✓ Recommend strategies to meet business and ecological goals
- ✓ Undertake socially responsible innovative industrial projects

CAREER OPPORTUNITIES

- ▲ **Process engineers**
- ▲ **Project engineers**
- ▲ **Environmental consultants**
- ▲ **Future researchers for international careers**

Waste treatment

Biomass valorisation

Circular economy

Students can also pursue with a PhD.



60% multi-faceted learning experiences combined with 40% do-it-yourself learning, under the face-to-face supervision of expert practitioners



DURATION: 2 years including a semester-internship

INTAKE: September

LANGUAGE: English



MODE: Full time on campus

LOCATION: Albi, France

ACCOMMODATION: For all students



TUITION FEES:

18000€ for 2 years
(10950€ for European applicants)

APPLICATION DEADLINE:
June

SYLLABUS

This master is a full time program over two years, divided into four semesters: lectures, tutorials, projects over the **3 academic semesters** followed by **an internship/master thesis** of one semester in a company or in a public research lab, in France or abroad. High-level professors, researchers and professionals of industry deliver classes. The program also includes **company visits and seminars**.

SEMESTER | 1

- ▲ Economics and management of the environment
- ▲ Feedstock and resources
- ▲ Generic methods for engineering and process design
- ▲ Transport phenomena
- ▲ Case study - Part I
- ▲ French language courses

SEMESTER | 2

- ▲ Eco technologies and innovation
- ▲ Biomass and waste pre-processing
- ▲ Reactors for renewable resource conversion
- ▲ Process instrumentation and control
- ▲ Case study - Part II
- ▲ French language courses
- ▲ Summer optional internship

SEMESTER | 3

- ▲ Global environmental business
- ▲ Gas and solid co-products post-processing
- ▲ Process modelling, integration and assessment
- ▲ Case study - Part III
- ▲ French language courses

SEMESTER | 4

- ▲ 6-month internship and professional thesis in industry and/or research laboratory (in France or abroad)

ADMISSION REQUIREMENTS

Bachelor's degree or equivalent in sciences or in engineering in one of the following fields:

- ▲ Chemical engineering
- ▲ Mechanical engineering
- ▲ Clean technology
- ▲ Energy

English: B2, IELTS 6, TOEIC 750 or equivalent.

Professional experience is highly welcome.



I liked how the program took a holistic approach to the subject. This gave us knowledge in many different areas so we were able to think about what aspect we liked best individually, and pursue that subject further for job opportunities in the future.

Leif, Canadian alumni

> **CONTACT**
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> **APPLICATION**
inscriptions.mines-albi.fr

> **WEBSITE**
www.imt-mines-albi.fr/en

