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

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.

**SEMMESTER 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

**SEMMESTER 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

**SEMMESTER 3**
- Global environmental business
- Gas and solid co-products post-processing
- Process modelling, integration and assessment
- Case study - Part III
- French language courses

**SEMMESTER 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.

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*Leif, Canadian alumni*

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

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