



SCIENCE & CREATIVITY: BUILDING A SUSTAINABLE WORLD



Lecturer in Process Engineering (M/F)

Institution:	IMT Mines Alès (National School of Mines of Alès)
Main post:	CREER (Centre for Research and Teaching in Environment and Risk)
Administrative location:	Alès (Gard department – Occitanie region)
Contract type:	Permanent contract – Public-sector contract – Full-time
Start date:	November 1, 2026

1. Introduction to our institution, the research and teaching centre 'CREER'

1.1 The Institut Mines-Télécom

The Institut Mines-Télécom (IMT), a 'grand établissement' within the meaning of the Education Code, is a public scientific, cultural and professional institution (EPSCP) under the primary supervision of the ministers responsible for industry and digital affairs. As France's leading group of engineering schools, it brings together 11 public engineering schools spread across the country, which train 13,500 engineers and PhD graduates. IMT employs 4,500 people and has an annual budget of €400M, 40 per cent of which comes from its own resources. IMT comprises two Carnot Institutes and 35 industrial chairs; it produces 2,100 A-level publications and 60 patents annually, and generates €110M in contract research.

1.2 IMT Mines Alès

The school's mission: "Building on its affiliation with the IMT and its strong regional roots, IMT Mines Alès provides its students with the best opportunities to fulfil their professional potential, enabling them to become responsible contributors to the nation's development whilst preserving the planet's resources." The values that drive us: boldness, commitment, collaboration and excellence.

Founded over 180 years ago, IMT Mines Alès currently has 1,400 students (including 250 international students) and 380 staff members. It has two campuses in Alès and also has branches in Montpellier and Pau. Its students include general engineers, specialist engineers (on apprenticeship programmes), PhD students and those studying for master's degrees or specialised master's degrees. It welcomes over 500 trainees on continuing professional development courses.

IMT Mines Alès is a prestigious 'grande école' ranked amongst the best engineering schools both nationally and globally. Our school, founded in 1843, is based in Alès, a city on a human scale and the capital of the Cévennes, where the quality of life is highly valued by its residents. A town in the Gard department (30), 30 km north of Nîmes, Alès lies at the foot of the Cévennes National Park, of which it is – by far – the most



important town, with a population of 42,452 and an urban area of 133,546 inhabitants (the 29th largest urban area in France, 5th in Occitanie).

The school has three research and teaching centres of high scientific and technological calibre, working in the fields of materials and civil engineering (C2MA), the environment and risk management (CREER), and artificial intelligence and industrial and digital engineering (CERIS). These units bring together around 85 permanent academic staff (half of whom hold HDR status), 35 research support staff, and over 100 PhD and post-doctoral students, who produce more than 130 A-level publications and secure €3 million in research contracts each year, a third of which are direct contracts with industry. These research staff contribute to seven research units, including four UMRs. IMT Mines Alès is accredited to award doctoral degrees through five doctoral schools.

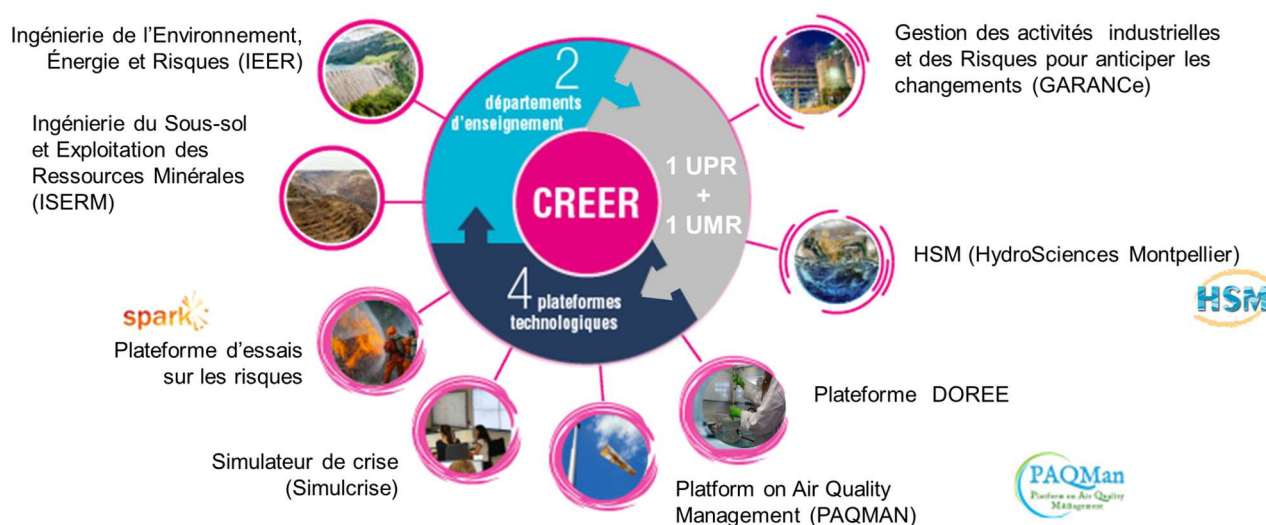
It has 12 technology platforms and 1,600 partner companies. Creativity is a key feature that underpins all its activities. The school was the first to set up an incubator in 1984 (200 companies established to date, 1,000 jobs created). The school offers rich and varied career paths: academic staff have opportunities for professional mobility across the various IMT schools and may also, if they wish, take on responsibilities within the school's functional departments (academic affairs, research, international relations, economic development, etc.) for part of their working hours.

At IMT Mines Alès, every individual plays a key role in our approach to Sustainable Development and Social Responsibility (DDRS). We are committed to promoting environmentally friendly practices, fostering diversity and inclusion, and ensuring ethical conduct in all our activities. We encourage all our staff to adopt a responsible approach in their day-to-day work and to put forward innovative ideas that strengthen our positive impact on society and the environment.

1.3 Centre for Research and Teaching in Environment and Risks (CREER)

CREER is one of the three teaching and research centres at IMT Mines Alès. Structured around distinct scientific areas, it is organised into two research units: the UPR GARANCe (Management of Industrial Activities and Risks to Anticipate Future Changes) and the UMR HSM (HydroSciences Montpellier); two teaching departments: Environment, Energy and Risks (EER) and Subsurface Engineering and Mineral Resource Exploitation (ISERM); as well as four technology platforms dedicated to research, teaching and supporting businesses.

This structure aims to ensure the coherent management of the Institute's three core areas of activity: teaching, research and innovation.



Within the HSM unit, IMT Mines Alès employs nine lecturer-researchers, five of whom are qualified to supervise research (HDR), as well as three technical staff and engineers, three postdoctoral researchers and ten PhD students. These staff members work on integrated water management, drawing on a wide range of



multidisciplinary skills and expertise in biology, chemistry, instrumentation and sensor development, industrial ecology, humanities and social sciences, geology, geostatistics, statistics, as well as hydro(geo)logical and statistical modelling (machine learning).

The GARANCe research unit focuses its activities on three main themes: the study of the physics of accidental phenomena; the understanding and management of industrial and urban discharges, as well as the characterisation of their environmental impacts; and the anticipation and strengthening of resilience and capacity for action in crisis situations. The range of scientific expertise within the GARANCe unit enables it to tackle the major challenges associated with transitions (industrial, environmental and societal), which require a variety of specialist skills (diagnosis, treatment, modelling, management, monitoring, etc.). It also enables the unit's members to participate in interdisciplinary projects and engage with various networks and communities, thereby broadening its reach.

2. Job description

2.1 Teaching Activities

Lecturers and researchers at the Institut Mines-Télécom are responsible for developing teaching programmes, coordinating teaching teams and leading initiatives in educational innovation. The successful candidate will therefore be required to contribute, in line with their areas of expertise, to the school's teaching activities, which include:

- ▶ Initial training for generalist engineers;
- ▶ Initial training for specialist engineers via apprenticeship;
- ▶ Specialised programmes (Masters and specialised Masters);
- ▶ Doctoral programmes.

The training of generalist students is organised across an introductory cycle and a professional specialisation cycle within the academic departments. Regarding the introductory cycle, the successful candidate will join, depending on their skills, the teaching team responsible for thermotechnical courses (50 hours) within the first-year 'Energy' teaching unit, delivered in the form of a cross-cutting project. They will also be required to manage and participate in the elective teaching unit 'Energy in Industrialised Societies'.

For the professional cycle, the successful candidate will work within CREER in the Department of Environmental, Energy and Risk Engineering (I2ER), which currently comprises three specialisations: Environmental and Energy Engineering (I2E), Major Risk Engineering (RISK) and Industrial Transition Engineering (ITI). In this role, the successful candidate will contribute to teaching on the 2ndth year in process engineering (the 'Oléum' project (50 hours), distillation (10 hours), chemical reactors (10 hours)) and bioenergy (12 hours), and in the 3rd year in CCUS (Carbon Capture, Utilisation and Storage) (15 hours) and the integration of new energy sources in an industrial setting (15 hours). The successful candidate will be required to assist with supervising students during educational projects (the 'I2E' project and the 'ITI' project).

The successful candidate must demonstrate an aptitude for teamwork and for innovative teaching methods. All teaching activities involving students (lectures, tutorials, practical sessions, academic supervision of projects and work placements, etc.) will amount to a minimum of 150 hours, with a gradual increase in workload over the first three years.

With regard to supervisory activities, the successful candidate will be required to participate, as part of the core curriculum, in the planning and supervision of fieldwork assignments relating to the action-based pedagogy developed by the school, as well as in the tutoring of students, whether full-time or in paid employment (apprentices).

2.2 Research activities

The successful candidate's research activities will form part of one of the research themes led by the CREER centre at IMT Mines Alès, within the UMR HydroSciences Montpellier (HSM) or the UPR GARANCe. These two units, which complement each other in their approaches, share a common focus on environmental issues, risk management and the ecological and industrial transition.



Within the UMR HydroSciences Montpellier (HSM), the successful candidate will be able to conduct research focusing on the interactions between water, the environment and health, with the aim of studying and predicting the impacts of climate change and human activities on the water cycle, as well as their feedback effects on humans and ecosystems. The research may lie at the interface between water treatment processes, emerging contaminants, energy efficiency and wastewater reuse. Several thematic areas are possible, including:

- **Development of advanced processes for the removal of emerging contaminants:** design and optimisation of treatment processes capable of removing organic micropollutants such as pharmaceutical residues, PFAS, endocrine disruptors, pesticides and microplastics; drawing on innovative approaches to performance assessment;
- **Design of energy-efficient and low-carbon processes:** with a view to ecological transition, this research will aim to reduce energy consumption at treatment plants, intensify processes, and recover by-products and resources (water, heat, nutrients);
- **Treatment and reuse of treated wastewater:** research may focus on wastewater treatment, the control of micropollutants and biological agents, the assessment of health and environmental risks associated with reuse, and the development of systems suited to agricultural, industrial or urban uses.
- **Treatment of industrial effluents/discharges and the deployment of innovative solutions for effluent treatment** to minimise environmental impact; the development of energy recovery solutions and the production of high value-added molecules from waste streams (gaseous, aqueous, biomass/organic waste), in particular through biological processes (this work may be carried out jointly with members of HSM and GARANCe)

Within the GARANCe UPR, the successful candidate will be able to pursue research related to industrial and energy transitions and their impacts on local areas, as part of the *PhyPhé* (Physics of Accidental Phenomena) or *COGEI* (Improving the Management of Industrial Discharges) research areas. This research area aims to characterise, through experimentation and modelling, hazardous physico-chemical phenomena, with a particular focus on emerging risks associated with new energy sectors. For example, research may focus on:

- **Modelling and simulation of combustion and explosion phenomena:** development of detailed kinetic models for the combustion of alternative fuels (hydrogen, ammonia, biogas) in new industrial energy systems, contributing to numerical simulation tools (CFD, hybrid AI models);
- **Dispersion and transport of pollutants resulting from industrial accidents:** development of mass and heat transfer models to simulate the dispersion of hazardous chemicals (toxic gases, flammable liquids, hydrocarbons) in aquatic or atmospheric environments following an accident;
- **Process safety in the context of the energy transition:** assessment of risks specific to new energy sectors — hydrogen production and storage, anaerobic digestion, use of ammonia as an energy carrier — experimental characterisation and modelling of thermal runaway in batteries.

In this context, the candidate must submit a research proposal that can be integrated into one of the two research units at the CREER Centre at IMT Mines Alès.

2.3 Commercialisation and technology transfer activities

The successful candidate will also be involved in developing and capitalising on the industrial contacts that IMT Mines Alès has with the wider economic ecosystem (manufacturers, local authorities, operators, engineering consultancies). They will be responsible for identifying and establishing research and innovation contracts with industrial and academic partners, as well as drafting funding applications to public bodies or international programmes. In this capacity, they will liaise with the contractual partner, oversee the scientific objectives defined in the project, lead a project team and monitor its progress, as well as manage related communications.



Furthermore, the successful candidate must be able to understand the process of commercialising research results in order to identify opportunities to contribute to cooperation between academic research, industrial research and the manufacturing sectors.

Finally, the successful candidate will be required to carry out, within their field of scientific and technical expertise, initiatives designed to support companies or the school's incubator in order to promote the creation of *spin-offs* and the development of technology-based enterprises.

3. Required profile and general assessment criteria

Your manager and the team will support you in developing your skills, while making the most of your experience and talents:

3.1 Required skills, knowledge and experience

Technical skills

- ▶ Significant teaching experience in the Centre's research fields and topics, and more specifically in the areas relevant to the post
- ▶ Ability to work as part of a teaching team and to develop teaching approaches tailored to specific needs.
- ▶ Ability to deliver teaching whilst ensuring pedagogical alignment (skills, learning objectives and methods, assessment)
- ▶ Knowledge of and proficiency in written and oral communication in English
- ▶ Experience in fields related to process engineering (fluid mechanics, thermal engineering, thermodynamics)
- ▶ Numerical modelling and simulation of physico-chemical phenomena
- ▶ Expertise in aqueous and/or gaseous effluent treatment systems
- ▶ Skills in assessing the energy efficiency of treatment processes
- ▶ Significant research experience in the fields and research topics of the units, and more specifically of the post
- ▶ Demonstrated experience of contributing to research projects resulting in scientific output (publications, conferences, etc.)
- ▶ One (or more) international experience(s) would be an advantage
- ▶ Ability to establish scientific collaborations on experimental research projects
- ▶ Ability to commercialise research and transfer technology or knowledge to industrial partners

Interpersonal and soft skills

- ▶ Dynamism
- ▶ Independence
- ▶ Commitment
- ▶ Teamwork
- ▶ Organisational skills
- ▶ Rigour and a systematic approach
- ▶ Initiative
- ▶ Adaptability
- ▶ Intellectual curiosity
- ▶ Creativity and innovation

3.2 Criteria for assessing applications

The pre-selection committee will assess applications on the basis of the following selection criteria:

Required qualification: PhD in one of the following fields: process engineering, chemical engineering, bioprocess engineering, environmental sciences, fluid mechanics, energy, thermal engineering or mass transfer.

Selection criteria for teaching duties:

- ▶ Level of teaching provided
- ▶ Emphasis placed on pedagogical innovation
- ▶ Contribution to and reputation within the academic community

Selection criteria for research activities



- ▶ National and international recognition of research outcomes
- ▶ Responsibilities held within the field of expertise
- ▶ Relationships with the academic and industrial sectors

The exercise of responsibilities, organisational activities and participation in consultative and decision-making bodies are also taken into account in the criteria under consideration.

4. Application



Administrative requirements for applications

The post falls within the discipline of “process engineering”.

The post offered by IMT Mines Alès is a full-time, permanent contract under public law, governed by the management framework of the Institut Mines-Télécom, in the role of Senior Lecturer, category C, category II.

- ▶ **Estimated salary range (excluding the annual variable bonus):** €43,000 – €76,000 gross per year, depending on qualifications and experience (reduced payroll costs in the public sector).



How to apply

The application package (available for download at this link:

<https://partage.imt.fr/index.php/s/DT9ZZPFPNpHm5HD>) must be accompanied by a resume, a cover letter, any letters of recommendation, as well as a copy of your ID card, your diplomas, and any certificates of training or internships. It must be sent exclusively to:

<https://institutminestelecom.recruitee.com/o/maitre-de-conferences-en-genie-des-procedes-hf-cdi-imt-mines-ales>

The recruitment team will carefully review your application.



Recruitment timetable

Closing date for applications: August 31, 2026

Indicative date of the pre-selection panel (without the candidates being present): **First half of September**
Eligible candidates will be notified as soon as possible after this date.

Indicative date of the recruitment panel (interviews with eligible candidates): **Second half of September**
The admissions panel's ranking will be published immediately after the panel's meeting.

Desired start date: November 1, 2026



Contact details

► Regarding the job description:

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► For administrative matters:

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Onboarding

A Smooth Onboarding Process for a Successful Start

From the moment you arrive, you'll benefit from an onboarding period designed to help you get acquainted with your responsibilities and your work environment. You'll be welcomed by your HR contact, who will guide you through all the steps necessary for a smooth transition into your new role.



Appendix to the job description for the recruitment of teaching staff and research-teaching staff at IMT Mines Alès

As part of their teaching and research remit, lecturer-researchers at our institution are required to carry out a range of teaching activities whilst contributing to scientific research in their discipline.

The teaching load is spread over the academic year according to the institution's needs.

This distribution may vary depending on the specific tasks assigned, ongoing research projects, and changes in the institution's educational and scientific requirements.

1. Teaching:

The teaching load is structured around the following elements:

- **Lecture hours (CM):** These hours correspond to sessions in a lecture theatre or classroom, where the lecturer/teacher imparts theoretical knowledge to a group of students.
 - Indicative figure: **100 to 150 hours of lectures per year**, depending on the requirements of the programme and the subject.
 - Subjects concerned:
 - Thermal Engineering
 - Elective module 'Energy in industrialised societies',
 - Process Engineering (OLEUM project),
 - Distillation
 - Chemical reactors
 - Bioenergy
 - Carbon Capture, Utilisation and Storage
 - Integration of new energy sources in industrial settings
- **Tutorials:** More personalised supervision sessions, in which students apply the theoretical concepts covered in lectures through practical exercises, case studies or projects.
 - Approximate duration: **50 to 100 hours of tutorials per year**, depending on the students' level and the specific requirements of the programme.
 - Subjects covered:
 - Thermal Engineering
 - Elective module: 'Energy in industrialised societies',
 - Process Engineering (OLEUM project),
 - Distillation
 - Chemical reactors



- Bioenergy
 - Carbon Capture, Utilisation and Storage
 - Integration of new energy sources in industrial settings
 - 'I2E' project
 - "ITI" Project
- **Practical sessions:** These sessions enable students to carry out experiments, simulations or laboratory activities under the direct supervision of a lecturer-researcher or lecturer.
 - Indicative duration: **40 to 80 hours of practical work per year**, depending on available resources (laboratories, equipment) and the number of students to be supervised.
 - Subjects covered:
 - Research and Development Projects
 - Water treatment and filtration

2. Supplementary teaching activities:

In addition to direct teaching, the lecturer-researcher/lecturer is also involved in several other teaching activities, which contribute to the training and supervision of students. These activities include:

- **Supervision of projects and dissertations:** Supporting students in the completion of their final-year projects or dissertations, which may include progress meetings, marking and oral examinations.
 - Approximate time commitment: **30 to 50 hours per year**.
- **Supervision of work placements:** Supervising students' work placements in companies or laboratories, ensuring regular assessment and monitoring.
 - Approximate time commitment: **30 to 40 hours per year**, depending on the number of students involved and the specific requirements of the programme.
- **Academic meetings:** Attending departmental meetings, academic committees or examination boards to manage degree programmes and course content.
 - Approximate time commitment: **10 to 20 hours per year**.

3. Research and doctoral supervision – for teaching and research posts only:

As a lecturer-researcher, research activities are also a key aspect of the role. The time devoted to research, as well as to supervising PhD students, is included in the total workload, but is often prioritised as part of the institution's scientific commitment.

PhD supervision: Supervising PhD students and contributing to their training, supporting their thesis work and helping them prepare for their thesis defences.

- Indicative figure: **30 to 50 hours per year** for doctoral supervision.

This breakdown may vary depending on the specific tasks assigned, ongoing research projects, and changes in the institution's teaching and research needs.



4. Flexibility and adaptability:

The teaching load may be adjusted in line with research projects, specific assignments and changes to the organisation of teaching programmes. Teaching hours may be adapted to suit teaching requirements, available resources and the priorities of IMT Mines Alès