

Advanced Master of Science in Welding Engineering



DURATION

1 year (full-time), 60 ECTS

APPLICATION DEADLINE

1 March (for non-EEA citizens)

1 June (for EEA citizens)

ACADEMIC CALENDAR



1st semester: 3rd week of September → end of January (exams in January)



2nd semester: 2nd week of February → July (exams in June)

www.kuleuven.be/academiccalendar

The Advanced Master of Science in Welding Engineering is the ideal stepping-stone to a high-level job in the field of welding and joining technology. In many countries, there is a permanent and growing demand for scientists and engineers who are knowledgeable and trained at an academic level in the field of welding engineering. This academic training is essential due to the increasing complexity of industrial production processes and the growing number of rules and regulations governing them, both in Europe and elsewhere.

Graduates who meet the highest standards

This advanced master's programme is indispensable (and obligatory) for engineers seeking to work as **Responsible Welding Coordinators**. Engineers interested in R&D, quality, design, production, maintenance, and particularly welding metallurgy will also find the programme instructive.

Metal construction companies are obliged to observe the International Standard EN ISO 14731, which identifies the quality-related responsibilities and tasks included in the coordination of welding-related activities. As there is a growing need for qualified welding coordinators, European and international standards are increasingly moving towards this standard. These standards include the new EN 1090 (steel structures and aluminium structures), EN 15085 (railway applications), ISO 24394 (aerospace applications), and EN ISO 3834 (fusion welding of metallic materials).

Programme

Our courses are grouped into four clusters:

- welding processes and equipment;
- materials and their behaviour during welding;
- construction and design;
- fabrication, applications engineering.

The programme also includes company visits.

PROGRAMME

COURSE	ECTS	SEM
• Welding Processes and Equipment 1	6	1 + 2
• Welding Processes and Equipment 2	6	1
• Welding Metallurgy 1 (Carbon and Low-alloyed Steel)	6	1
• Welding Metallurgy 2 (High-alloyed Steel + Nonferrous Metals)	6	1 + 2
• Corrosion and Wear	4	2
• Production Engineering and Quality Management of Welded Structures	6	2
• Design and Calculation of Welded Structures	6	1 + 2
• Master's Thesis	20	1 + 2

For detailed descriptions of the courses and for the course timetable, please consult www.kuleuven.be/ma/mnmwes/programme.

KU Leuven
Technology Campus
De Nayer is certified as an
Authorised Training Body for
International Welding Engineering
by the Belgian Welding Association
(BVL), which represents the
International Institute of
Welding (IIW).

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Discover KU Leuven

Founded in 1425, the University of Leuven (KU Leuven) has been a centre of learning for almost six centuries. Today, it is Belgium's largest and highest-ranked university as well as one of the oldest and most renowned universities in Europe.

As a leading European research university and co-founder of the League of European Research Universities (LERU), KU Leuven offers a wide variety of programmes in English supported by high-quality interdisciplinary research. Within the field of science, engineering, and technology, KU Leuven offers five academic educational profiles organised by five faculties: Science, Engineering Science, Bioscience Engineering, Engineering Technology, and Architecture. Boasting an outstanding central location in the heart of Europe, KU Leuven offers a truly international experience, high-quality education, world-class research and cutting-edge innovation.



KU Leuven is a founding member of
the League of European Research Universities

Admission requirements

- If you graduated from one of our master's programmes in engineering or engineering technology last year, please contact the Programme Director.
- If you are a new student, you have to apply for the programme via the International Mobility and Admissions Unit.
- There is a limited number of places available for the programme.

You also have to provide evidence of your English proficiency.

Programme admission: www.kuleuven.be/ma/mnmwes

General admission: www.kuleuven.be/admissions

Tuition fees

For the current academic year the tuition fee is € 890 for EEA students and € 1,750 for non-EEA students. The tuition fees for future academic years can be higher, as a result of indexation. Please consult the website for the most recent information:

www.kuleuven.be/tuitionfees.

Application procedure

KU Leuven uses an online application system. You can download and submit your application form via www.kuleuven.be/application. Students with a Flemish degree can consult www.kuleuven.be/studentenadministratie.

Career perspectives

This programme opens up a wide spectrum of professional possibilities and exposes you to an extremely varied field of action: petrochemistry, the aviation and aero-space industry, civil construction, assembly plants, the nuclear sector, shipping and logistics, general construction, and more. As a welding engineer, you will carry out a wide range of duties, including research, design, production, maintenance, sales and quality inspection.

Our graduates find employment in local SMEs, large multinational industrial companies as well as private and public organisations at home and abroad. There is a real need for experts with the capability to conduct research, carry out quality control analyses, and perform inspections, monitoring and certification in the broad field of welding. Some graduates start a career as independent consultants.

Visit the website of EULASA, our welding engineering student association, for more insights: www.eulasa.eu.

Degrees and certifications

Upon successful completion of the entire programme (60 ECTS), you will be awarded the degree of MSc in Welding Engineering.

Upon successful completion of the courses (40 ECTS), you gain access to the International Institute of Welding (IIW) oral examination. A passing score results in IIW accreditation as a certified International Welding Engineer (IWE) and European Welding Engineer (EWE). An engineer who holds the IWE certificate is automatically qualified to work at the highest level of coordination that is specified in the standards.

Contact:

www.kuleuven.be/ma/mnmwes

Programme Director:

Patrick Van Rymenant (patrick.vanrymenant@kuleuven.be)