

# INTERNATIONAL PROGRAMMES

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# Master's degree



# **MSc Energy Science and Technology**

Ulm University • Ulm

### Overview

| Degree  | Master of Science   |
|---|---|
| Teaching language   | • English   |
| Languages   | All courses are held in English.  |
| Full-time / part-time   | • full-time   |
| Programme duration  | 4 semesters   |
| Beginning   | Winter semester   |
| Additional information on beginning, duration and mode of study | https://www.uni-ulm.de/en/nawi/school-of-chemistry/studies/study-courses/study-course/course/energy-science-and-technology-master/  |
| Application deadline  | The application deadline is 15 March for the following winter semester.   |
| Tuition fees per semester in EUR                                | Varied  |
| Additional information on tuition fees                          | Generally, German citizens, citizens of EU or EEA countries, most refugees, and students who obtained their higher education entrance qualification (normally the "Abitur") in Germany or who obtained a similar qualification from a German school in another country do not have to pay any tuition fees. Moreover, PhD/doctorate students are not liable to pay tuition fees.  Read more |
| Combined Master's degree /<br>PhD programme                     | No  |
| Joint degree / double degree programme                          | No  |
| Description/content   | <ul> <li>The Master of Science in Energy Science and Technology provides you with</li> <li>a comprehensive education in the scientific and technological aspects of modern techniques for energy conversion and energy storage, such as fuel cells and batteries</li> <li>hands-on experience in chemistry, materials and energy science, and technology labs</li> </ul>                    |

You will get deep insights in an active research and development environment, composed of basic research at our university, applied research at adjacent institutes, and industrial development at the following nearby companies:

- Centre for Solar Energy and Hydrogen Research (ZSW)
- Helmholtz Institute for Electrochemical Energy Storage (HIU)
- Daimler Research Centre

Reflecting the interdisciplinary programme character, courses will be taught by lectures from our natural science and engineering departments as well as from the participating research institutes and companies.

### **Course Details**

#### Course organisation

Each year we bring together very motivated and talented international students from different areas of the natural sciences and engineering. We want to ensure that all students start our programmes at the same level and will complete their Master's programme successfully.

Over the course of a three-semester period, lecture courses, seminars, and labs are offered in the fields of Physical Chemistry, Organic and Inorganic Materials Chemistry, Materials Science, Engineering, Energy Science and Technology, Surfaces/Interfaces/Heterogeneous and Electrocatalysis, and Simulation and Modelling.

The final semester is reserved for the Master's thesis, which is research-oriented and has a duration of six months (full-time).

# A Diploma supplement will be issued

Yes

#### International elements

- International guest lecturers
- Language training provided
- Training in intercultural skills

# Course-specific, integrated German language courses

Yes

Course-specific, integrated English language courses No

### Costs / Funding

Tuition fees per semester in EUR

1,500 EUR

# Additional information on tuition fees

Generally, German citizens, citizens of EU or EEA countries, most refugees, and students who obtained their higher education entrance qualification (normally the "Abitur") in Germany or who obtained a similar qualification from a German school in another country do not have to pay any tuition fees. Moreover, PhD/doctorate students are not liable to pay tuition fees.

Read more

#### Semester contribution

The semester contribution is 170 EUR per semester. For further details, see the following website of the Office of the Registrar: https://www.uni-ulm.de/en/study/organisation/tuition-fees/

#### Costs of living

The cost of living in Ulm is estimated to be around 600 EUR to 850 EUR per month. For the estimated cost of living, see the following website of the International Office: https://www.uni-ulm.de/en/io/degree-phd/welcome/finances/living-expenses/

# Funding opportunities within the university

No

### **Requirements / Registration**

# Academic admission requirements

Academic requirements MSc programme Energy Science and Technology:

- 1. Bachelor's degree
  - Bachelor of Science or Bachelor of Engineering in Physics, Chemistry, Chemical Engineering, Materials Science, or Electrical Engineering or in other programmes relating to energy science
  - o Duration of Bachelor's programme: at least three years
- Bachelor's course work in Mathematics and Physics: for each, basically two courses of three hours per week and semester or comparable course work to be evidenced by course information on official transcript of records
- 3. Fundamental skills in natural sciences, materials science, and/ or engineering sciences
  These essential skills may be gained by passing the pre-Master's course offered by Ulm
  University.

Prospective students are expected to

- be willing to acquire a basic knowledge of German. German courses are part of the curriculum.
- be willing to study/live in a challenging, multi-cultural environment.

Applicants have to provide the following:

- Curriculum vitae (maximum two pages)
- Statement of objectives/motivation (maximum one page)
- Two letters of reference by university lecturers from the Bachelor's university
- Transcript of records of all semesters/terms studied in the Bachelor's programme
- Information on the grading system at the Bachelor's university
- Bachelor's degree certificate
- English test score report

Evaluation of applications is based on the following:

- Bachelor's programme, courses attended, internships, and work experience
- Bachelor's grade or CPGA and grades of relevant courses
- Motivation letter provided by the applicant
- Evaluation of applicant by university lecturers (reference letters)

#### Language requirements

Proof of sufficient English language skills at level C1 of the Common European Framework of Reference for Languages (CEFR). This is proven by:

- 7.0 points or better in the International English Language Testing System (IELTS); if the score and Common European Framework of Reference (CEFR) level are given at the same time, the higher level of language proficiency will be recognised
- Certificate in Advanced English or Certificate of Proficiency in English at the Cambridge exam
- 490 (listening), 455 (reading), 200 (speaking), and 200 (writing) points or better in the Test

of English for International Communication (scale 10-990) (TOEIC)

- 95 points or better in the Test of English as a Foreign Language Internet-based (TOEFL iBT institution code 8407)
- Level III or level IV for UNIcert or
- CEFR C1 level or higher, e.g. indicated on the higher education entrance qualification
- an examination (university level) in the area of English language with an expressly stated
   C1 level, indicated by the transcript of records

Applicants who are English native speakers do not have to submit any English language test results.

Application deadline

The application deadline is 15 March for the following winter semester.

Submit application to

Applications are submitted online. All information and requirements are also shown on the respective website.

https://www.uni-ulm.de/en/study/application-and-enrolment/masters-programmes/master-energy-science-and-technology-englisch/

### **Services**

Possibility of finding parttime employment Student assistant jobs are regularly offered by all institutes of the faculty. Student assistants help with the preparation and execution of exercise classes, work in research projects, or help with administrative jobs. Furthermore, several companies with strong ties to the university are located on campus (e.g. Daimler TSS, Continental, BMW Car IT, Nuance, and more) and usually offer student jobs.

Read more

Accommodation

Students admitted to the programme have the opportunity to have a room reserved in one of the student residences. The university has several residences (all within a bus ride or walking distance from campus) featuring fully furnished rooms for one person and a kitchen and bathroom that are shared with a few other students.

Rental rates vary between 215 EUR and 404 EUR per month. If desired, student accommodation in halls of residence can be arranged by the coordination office. Private accommodation must be arranged by the students themselves.

Career advisory service

https://www.uni-ulm.de/en/university/career/career-services/students/

Support for international students and doctoral candidates

- Welcome event
- Tutors
- Specialist counselling
- Visa matters
- Pick-up service

# **Ulm University**



Main entrance of Ulm University

© Ulm University

Founded in 1967, Ulm University is dedicated to world-class teaching and research in medicine and STEM. The more than 10,000 students are distributed among the faculties of medicine, engineering, computer science and psychology, mathematics and economics as well as natural sciences.

According to a Times Higher Education ranking, which is based on research and teaching excellence, Ulm University is ranked 14th worldwide among all universities founded in the "Golden Age of Higher Education", an era between 1945 and 1967 that is characterised by rapid university expansion. In a broader perspective, Ulm University is ranked 148th worldwide among all universities regardless of their age and thus belongs to the 15 best universities in Germany, according to another recent analysis by Times Higher Education.

Ulm University's subject range concentrates around the MINT subjects (Mathematics, Information Technology, Natural Sciences and Technology); the latest research findings are swiftly incorporated into the curriculum, and, thus, always ensure state-of-the-art subjects and content. Ulm University attaches great importance to the ongoing refinement of its high standards in teaching, which are defined and anchored in its teaching mission statement. Ulm University's continuing academic education offers working professionals specialist knowledge and management skills.

As a young research university, Ulm University is oriented towards the global challenges of the future12 strategic and interdisciplinary research themes are contributing to improvements in the areas of ageing, sustainability, and technologies of the future as well as human health and well-being. Great success in the acquisition of third-party funding and numerous larger collaborative projects, such as collaborative research centres and a Cluster of Excellence, are all testimonies to the university's research strength.

Ulm University is the centre of and driving force behind the "Science City Ulm", an innovative teaching, research and science hub. There are numerous start-ups, development centres of renowned companies such as Siemens, Nokia, Mercedes-Benz Group AG, BMW or Continental as well as clinics and non-university research institutions that are connected with the university. In addition to close collaborations in research projects, contract lecturers from the industry bring their knowledge into the university. At the same time, students gain insight into practice through internships and final theses.

Ulm University is a **founding member of YERUN**, a network of highly ranked young European research universities and it hosts the German headquarters of Germany's largest transnational education project, the German University in Cairo.

For more information on Ulm University, see:

https://www.uni-ulm.de/en/or watch this video about study experience at Ulm University.



### University location

Ulm is **one of the most innovative**, **dynamic**, **fast-growing and liveable cities in Germany**It is located in the heart of southern Germany, near Stuttgart, Munich, the Alps and Switzerland.

With a population of more than 120,000 people, Ulm has anideal size for living, studying and working The city offers a diversified mix of

medieval and modern architecture and a great variety of cultural, sports and leisure activities.

A healthy mix of medium-sized businesses and global players, of high-tech and trade, of innovation and tradition makes Ulm and the greater Ulm area to **one of Germany's economically most dynamic regions** 

A literally outstanding landmark is the "Muenster", Ulm's cathedral. The Muenster has the world's highest steeple, which measures 161.5 metres (530 ft).

Ulm is also the birthplace of Albert Einstein (1879-1955), the world's most famous scientist.

Read more

#### **Contact**

#### **Ulm University**

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## International Programmes in Germany - Database

www.daad.de/international-programmes www.daad.de/sommerkurse

#### Editor

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#### Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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