



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



Master of Science in Engineering Physics

Carl von Ossietzky University of Oldenburg • Oldenburg

Overview

Degree	Master of Science in Engineering Physics
In cooperation with	University of Applied Sciences Emden/Leer
Teaching language	<ul style="list-style-type: none">English
Languages	Courses are held in English, additional German lectures are available and can be taken if the command of German is sufficient.
Full-time / part-time	<ul style="list-style-type: none">full-time
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	15 July for the following winter semester 15 January for the following summer semester
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>The Carl von Ossietzky University Oldenburg and the Emden/Leer University of Applied Sciences offer the international programme in Engineering Physics to close the gap between traditional physics and engineering education. The internationally-oriented degree programme in Engineering Physics gives students insights into current research fields and new developments in modern applied physics.</p> <p>Biomedical Physics</p> <p>Providing at first a basic foundation in anatomy and physiology, the specialisation in "Biomedical Physics" goes on to emphasise on modern methods in medical radiation applications such as radiotherapy, nuclear medicine or radiology, and basics of minimal invasive therapy including micromechanical and laser assisted methods as well as other imaging techniques such as ultrasound, Nuclear Magnetic Resonance, and optical tomography. Well-established medical engineering physics such as medical electronics, data and image acquisition and processing,</p>

radiation biophysics, laboratory diagnostics, and biomechanics are also covered. Training is performed in close cooperation with the Medical Centre for Radiotherapy and Nuclear Medicine at the Pius-Hospital Oldenburg.

Acoustics

The specialisation in "Acoustics" covers infrasound, audible sound, ultrasound and structure born sound, and mechanical vibrations. Topics address digital signal processing, basics of radiation and wave propagation, physical and technical properties of electro-acoustic transducers, numerical calculation of mechanical vibrations, acoustic properties of matter, and evaluation of the impact of sound and vibrations on humans. Subjective perception of sound, physics of the ear, sound design of products, sound environment of transportation means, and noise abatement are fields of research in Oldenburg.

Laser & Optics

Laser technology and optics are key technologies of the 21st century. Fibre optic networks for data transmission, optical data carriers, lithography for the production of microchips are examples. Optical diagnostics are indispensable in medicine and environmental technology. Lasers are a tool for cutting, welding, drilling, perforating and marking.

Renewable Energy

Education in the field of Renewable Energy (RE) is strongly correlated with models of the future energy supply. RE research and education at the University of Oldenburg is focused on physical, technical, ICT, and economic issues of RE power generation and its system integration. Many research groups within the Institute of Physics are focussing on material research (photovoltaics, battery, nano-optics) and cooperating with theoretical and applied physics. Furthermore, there is a broad range of research in the field of wind energy physics: wind energy systems, turbulence, wind energy and statistics, and wind and solar energy meteorology.

Course Details

Course organisation

Approx. one-third of the study time is arranged in fixed courses pertaining to advanced physics, theoretical physics and management. All other courses can be chosen according to the subject of specialisation. Personal initiative and individual work are encouraged through long-term projects in the laboratory.

The specialisation in "Biomedical Physics" offers the great opportunity to obtain the "Fachanerkennung Medizinische Physik" from the "Deutsche Gesellschaft für Medizinische Physik (DGMP)".

The European Wind Energy Master consortium is composed of four universities, world leaders in wind energy and offshore wind energy research and education (Technical University of Denmark, Delft University of Technology, Norwegian University of Science and Technology, University of Oldenburg).

Engineering Physics is offered by the University Oldenburg and the University of Applied Science Emden/Leer. Several lectures and laboratory projects on laser technology are given in Emden. You will receive a "Semesterticket" when you enrol which allows you to use public transport free of charge.

Individual part-time studies are possible.

For further information, please see:

<https://l.uol.de/ep>

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A Diploma supplement will

Yes

be issued

International elements

- Specialist literature in other languages
- Language training provided
- Training in intercultural skills
- International comparisons and thematic reference to the international context

Integrated internships

An internship of two months is to be completed in a research institution or company and will be rewarded with 15 ECTS credit points. Implementation in the Master's thesis is possible. Career Service will assist students in finding an appropriate internship.

Course-specific, integrated German language courses

No

Course-specific, integrated English language courses

No

Costs / Funding

Tuition fees per semester in EUR

None

Semester contribution

Approx. 400 EUR per semester

Costs of living

You should expect to spend about 850 EUR per month to cover personal expenses (accommodation, health insurance, food).

Funding opportunities within the university

No

Requirements / Registration

Academic admission requirements

A first academic degree, Bachelor's degree (or equivalent) in a subject related to engineering physics is required.

Language requirements

Command of English: B2

Application deadline

15 July for the following winter semester
15 January for the following summer semester

Submit application to

<https://my.uni-assist.de/>

Services

Possibility of finding part-time employment

Students are permitted to work while pursuing their studies. If you are a student from a non-EU country, you are allowed to work 120 full or 240 half workdays per year.

Accommodation

Furnished accommodation is available at a cost of 150 to 300 EUR per month (halls of residence or private).

If you want to come to Oldenburg from abroad, there is now less need to worry about accommodation or other organisational matters. The Studentenwerk Oldenburg offers international students a service package for 964 EUR, which includes accommodation for six months and other services that should help you get started. Furthermore, a counselling service is available to get you safely through your first weeks and months in Oldenburg.

For further information and an application form, please check:

<http://www.studentenwerk-oldenburg.de/en/internationale-studierende.html>

Support for international students and doctoral candidates

- Buddy programme
- Tutors
- Specialist counselling

Contact

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🌐 Course website: <https://uol.de/en/physics/studies/courseofstudies/ep>

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International Programmes in Germany - Database

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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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