

Information for Applicants

W3 Professorship

„Materials Engineering“

Faculty of

Engineering

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I. THE UNIVERSITY OF DUISBURG-ESSEN

Broad base, strong peaks

Open minded! We are one of the youngest universities in Germany and think in terms of possibilities instead of limits. In the heart of the Ruhr metropolis, we develop ideas with a future at eleven faculties. We are strong in research and teaching, live diversity, promote potentials and are committed to an educational justice worthy of the name.

University of Duisburg-Essen

The University of Duisburg-Essen (UDE) - one of the youngest and largest universities in Germany - is located in the middle of the Ruhr Metropolitan Region. Its broad spectrum of subjects ranges from humanities, social sciences and education to economics, engineering, natural sciences and medicine. Since its foundation in 2003, the UDE has developed into a globally recognized research university. This is documented by the international top positions it has achieved in the meantime. In a comparison of the best universities founded after the turn of the millennium, the UDE ranks fourth worldwide. In the Times Higher Education (THE) Young University Ranking, it ranks 19th among the top 250 international universities that are less than 50 years old. The UDE is also far ahead when it comes to citations of scientific publications: It ranks fifth nationwide and 97th in the THE World University Ranking in an international university comparison.

Profile focus

The UDE's range of services is broad and includes, among other things, the interdisciplinary profile focuses on nanosciences, biomedical sciences, urban systems and the transformation of contemporary societies. Another central field of research is lifelong educational and socialization processes.

Digitally supported teaching and learning concepts

Through innovative and digitally supported teaching and learning concepts, the UDE is an attractive place for research-based teaching. It offers its more than 42,000 students from over 130 nations almost 250 courses of study, 127 of which are teacher training courses.

Educational justice

The UDE is regarded as a nationwide model of how educational justice can be implemented at a university. Numerous measures and projects promote young talents with prospects. The UDE sees itself as a lively place of diversity and openness, where students, researchers and employees can develop their potential and willingness to perform. The aim is to achieve a broadly anchored, resource-saving development.

Partnerships & cooperations

The UDE has a strategic partnership with the Ruhr University Bochum and the Technical University Dortmund under the umbrella of the University Alliance Ruhr (UA Ruhr). They cooperate closely in research and teaching and are also jointly present on three continents with their own branch offices. In addition, the UDE maintains partnerships with over 100 universities around the world.

Further information can be found at: <http://udue.de/bewerberinformationen>

II. THE FACULTY OF ENGINEERING SCIENCES

FACULTY OF ENGINEERING.
ALL ENGINEERING DISCIPLINES UNDER ONE ROOF.

The Faculty of Engineering Sciences at the University of Duisburg-Essen provides a unique profile. Nowhere else in Germany are engineering sciences so close as at the University of Duisburg-Essen. Four departments teach and research Civil Engineering, Electrical Engineering and Information Technology, Computer Science and Applied Cognitive Science and Mechanical and Process Engineering, including Industrial Engineering, under one roof. As a result, the faculty has an integrated spectrum of engineering disciplines that is unique in Germany and meets all requirements for modern, innovative, and interdisciplinary university education and research in the field of engineering sciences.

With about 11.300 students – about 40% of them from other countries – the faculty is a strong partner for the regional and cross-regional industry. Graduates of our study programmes enjoy a high reputation due to their broad professional competence as well as due to the special interdisciplinary and international orientation of our study programmes. Classical study courses such as mechanical engineering, electrical engineering, materials technology, civil engineering and informatics are complemented by modern interdisciplinary study courses such as nano engineering, applied cognitive and media science, medical engineering or industrial engineering. In addition, social skills are addressed that are particularly trained through teamwork and interaction with international students. Our integrated international bachelor's and master's degree programme "International Studies in Engineering (ISE)" with 50% English lectures which is attractive due to its global character and versatility not only for international students but also for German speaking students.

We have developed a sustainable support system for our first-year students that ensures a seamless transition from school to university education. They have the opportunity to learn the contents of their studies in small groups within the first three semesters, enabling them to quickly complete the demanding engineering study at a high level. In addition, there are intensive laboratory experiments that convey how to use the technologies of the future right from the start. The conversion of diploma degree programmes into consecutive bachelor's and master's degree programmes was completed in the winter semester 2007/2008, while maintaining the internationally respected quality of the German diploma degree.

With an investment volume of more than 60 million Euro for equipment infrastructure the Faculty of Engineering has excellent opportunities to develop cutting-edge technologies and conduct basic research. With seven concluded and one running DFG-Collaborative Research Centers as well as six DFG funded research units the faculty is the best address for research in the fields of nanotechnology and material sciences. Beside of that the topics

- Nanotechnology,
- Combustion Science,
- Mechatronics,
- Communication Systems,
- Microelectronics and Medical Technology,
- Information Technology,
- Product Engineering and Materials Technology,
- Civil Engineering,
- Computational and Cognitive Sciences,
- Industrial Engineering,
- Logistics

are the focus of research activities.

By focusing on these areas, the faculty has achieved a high international reputation, which is documented by numerous research projects. In addition, there are the affiliated institutes and other associated Institutes:

- Development Centre for Ship Technology and Transport Systems (DST),
- Institute for Mobile and Satellite Communication (IMST),
- Institute for Energy and Environmental Technology (IUTA),
- IWW Water Center (IWW),
- Center for Fuel Cell Technology (ZBT),
- Fraunhofer Institute for Microelectronic Circuits and Systems (Fraunhofer IMS),
- Gas-und Wärme-Institut (GWI),
- Center of Rotating Equipment (CoRE),

which collaborate closely with the faculty and have an annual total revenue of more than 35 million Euro. The Faculty and the affiliated and associated institutes have proven to be excellent partners for complex technological solutions and for the recruitment of excellently trained engineers.

In order to promote cooperation between the departments and institutes and to increase visibility the faculty has established four research profiles, which are “Tailored Materials”, “Human-Centered Cyber-Physical Systems”, “Smart Engineering” and “Energy and Resource Engineering”.

III. THE DEPARTMENT FOR MECHANICAL AND PROCESS ENGINEERING

The profile of the Faculty of Engineering (FIW) at the University of Duisburg-Essen is unique: at no other university in Germany you will find engineering sciences working so closely together. Four departments including seven teaching units teach and research under one roof. The resulting synergy effects are extensive, and there is a wide range of interdisciplinary subjects. The faculty boasts nine main areas of research and teaching that are unmatched anywhere else in Germany.

IV. REQUIREMENTS FOR THE PROFESSORSHIP “MATERIALS ENGINEERING”

We are one of the youngest universities in Germany and think in terms of unlimited possibilities instead of possible limitations. Located in the heart of the Ruhr metropolis, our 11 faculties develop ideas with a future. We are strong on research and teaching, embrace diversity, promote academic potential and commit ourselves to educational equality.

The Faculty of Engineering at the University of Duisburg-Essen intends to fill the following professorial chair as soon as possible with a personality who represents the field in basic and applied research and teaching:

University Professorship for "Materials Engineering"

(Grade W 3 LBesO W)

The Faculty of Engineering with its four departments of Civil Engineering, Electrical Engineering and Information Technology, Computer Science and Applied Cognitive Science, and Mechanical and Process Engineering conducts basic and applied research at a high, internationally renowned level. With approximately 80 professorships and over 10,000 students, this faculty is one of the largest in Germany.

We are looking for a personality who is scientifically relevant and internationally proven through research activities and accompanying work on applications of innovative materials in mechanical engineering. Ideally, the candidate will have broad experience in elementary material processes relating to the properties of material surfaces, e.g. tribological stresses and cyclic stresses of materials with corresponding influences on the service life of components.

Publications in high-ranking peer-reviewed journals as well as experience in the implementation of competitive third-party funded projects, preferably DFG-funded projects, relevant to the advertised position are expected. Experience with and in industry or large research institutions in a position with responsibilities is desired.

The willingness to collaborate intensively with the professorships and working topics of the Faculty of Engineering Sciences as well as the interdisciplinary Centre for Nanointegration (CENIDE) of the UDE and the profile focus Materials Chain of the University Alliance Ruhr is expected. The willingness to acquire, initiate and implement interdisciplinary third-party funded projects as well as establishing and maintaining international contacts is also required.

She or he is jointly responsible for teaching in German and English. Specifically, the German-language Bachelor's and Master's degree programs and the international Bachelor's and Master's degree programs of the Department of Mechanical and Process Engineering. In addition to the basic subjects in the field of materials technologies of metals, references between component and operational strength as well as failure analysis including the necessary engineering fundamentals are to be taught through in-depth lectures. Cooperation in further development of the study programs as well as in self-administration committees of the university is required.

The University of Duisburg-Essen highlights the quality of its teaching. Please conceptualize your didactic teaching vision, also concerning the special profile of the University of Duisburg-Essen.

The hiring requirements comply with § 36 of the Higher Education Act of North Rhine-Westphalia (Hochschulgesetz NRW).

The University of Duisburg-Essen aims to increase the diversity of its members and considers their competencies in relation to, e.g., their age or origin (s. <http://www.uni-due.de/diversity>). It aims to increase the number of women on its academic staff and therefore emphatically encourages women with pertinent qualifications to apply. Women with equal qualifications will be preferred in accordance with state equality laws. Applications of qualified disabled persons in the legal sense of § 2 para. 3 SGB IX are also welcome.

Please send your applications, including the usual documents (CV, a list of scientific publications, documents about the scientific and professional development, copies of certificates, details about the personal research profile and the resulting perspectives at the University of Duisburg-Essen, teaching

and learning concept, information about previous teaching occupations, experience in academic administration and third party-funded research) to:

Dekan der Fakultät für Ingenieurwissenschaften der Universität Duisburg-Essen, Herrn Univ.-Prof. Dr.-Ing. Dieter Schramm, Forsthausweg 2, 47057 Duisburg, Germany.

Deadline: 29th November 2021

For further information about the chair, its role at the University of Duisburg-Essen and about the Faculty of Engineering please visit <https://www.uni-due.de/iw/en/>.

V. STAFFING AND FACILITIES

Details will be determined within the negotiations for the filling of the position.

VI. LEGAL FRAMEWORK

With the passing of the Higher Education in North Rhine-Westphalia Act (HG) dated 31.10.2006 (amended 05.12.2017), the university system was radically restructured as of 1.1.2007.

Operating under German law, the universities are defined legally as public corporations supported by the State of North Rhine-Westphalia. State finance is based on the tasks of the universities, agreed goals and performance delivered. The universities have a global budget and are not subject to the instructions of the North Rhine-Westphalian Ministry of Innovation, Science, Research and Technology.

Legal status of Professors

Assuming legal prerequisites are met, professors in Germany are usually employed on a civil-servant basis (= full tenure). However, employment on the basis of a contract under private law is also possible.

For further information (laws, directives, etc.), please visit:

<https://www.uni-due.de/verwaltung/recht>.

VII. SALARY

As of January, 1, 2005, the C salary system that used to apply in Germany to all newly appointed professors made way for a performance-oriented salary system. As such, the new salary system is part of a recent condition-of-service reform. The formerly standard seniority grades were replaced by a W salary system (W stands for the German “Wissenschaft”, meaning “Science”). The salary consists of a basic salary (W2 or W3) and “performance bonuses”. From 1 January 2005, the W salary system applies to all newly recruited professors and to those who change to the W salary system. W3 is planned for the professorship offered here.

Performance-related salary components can be awarded on the occasion of appointment and tenure negotiations (“appointment and tenure bonuses”), for special achievements in research, teaching, art, further training and promotion of young scientists (“special performance bonuses”) and for carrying out functional or special responsibilities within the framework of university self-management or university administration (“functional performance bonuses”). Under certain circumstances, so-called research and teaching allowances may be paid out of funds provided by private third parties.

Within the framework of appointment negotiations, any temporary appointment-related performance bonuses are linked to an individual goal agreement.

The remuneration in case of appointments will be negotiated individually with the Rector of the University of Duisburg-Essen.

Information on the legal basis for the W salary systems can be found in on the internet at the following addresses:

<https://www.finanzverwaltung.nrw.de/de/beamtinnen-und-beamte>
<https://www.hochschulverband.de/435.html#>

Appendix: POSITION OPENING