Knowledge. That’s what counts in life.

The Westfälische Hochschule was founded in 1992 under the name of its headquarter Gelsenkirchen University of Applied Sciences. As a state-managed university we consider it our responsibility to establish the necessary conditions for practical academic training at our sites in Gelsenkirchen, Bocholt and Recklinghausen in order to secure a base for qualified young talents in our region. Our study programmes are characterized by a clear technical-economic profile, which is oriented towards the needs of the economy.

This also manifests itself through our close and expanding cooperation with companies in the field of dual study programmes. With further concepts, which received multiple nationwide awards, we have made it our task to promote young people and develop their various talents. As a partner for our region, we do not only set out to support the teaching and learning but also the research. We consider strong research as an essential element of contemporary teaching oriented towards the challenges of today and tomorrow. An important pillar of our research activity is the diversity of topics. We want to further cultivate this variety and simultaneously establish research focuses. Even with a clear commitment to our regional responsibility we are open to a globalised world. International university partnerships, students from other countries, as well as study and praxis stays of our students in all continents of the world contribute to the completion of our profile. We offer a wide range of future-oriented study programmes.

Furthermore, we not only take account for the current structure of the economy in our region with courses in the fields of engineering, science, informatics, economics, journalism and law, but we also give a new impetus to newly developing branches and, as a result, we open various opportunities for prospective students. Accompanying support services help students to orientate and solve technical problems, especially during the introductory phase.

Research creates the future. Whether it is about new energy supply concepts, a safer internet, intelligent mechatronic systems or new diagnosis and therapy systems in the health care sector, we work on tomorrow’s solutions. Application-orientation and close cooperation with the practical field shape our work.
**Institute for Molecular Biology**

A multidisciplinary approach is an important key to the work of our Biology department in Recklinghausen which consists of about 20 scientists (incl. PhD students) supported by Bachelor/Master Thesis students. The research groups actively collaborate with national and international laboratories as well as industrial partners.

The Bioprocess Technology group is dealing with all aspects of the technical use of biochemical reactions. The focus is on bioreactors and biocatalysis, as well as fermentation and bioprocess integration. Major topics of the Bioinformatics group are software development of algorithmic solutions, analysis of genomes and transcriptomes and digital image processing. The Biomaterials group utilizes biologically inspired strategies to synthesize/process materials (biomimetics) and nanoparticles for medical applications, e.g. bioactive coatings for medical implants or bioactive composite materials for reconstructive medicine. Core facilities of the Medical Biology & Biochemistry research activities are represented by the key technologies protein engineering and design, stem cell research and molecular diagnostics.

**International Collaborations**

- University of Edinburgh, UK
- University of Western Ontario, London, Canada

**National Collaborations**

- MKG Dept., University Medicine, Mainz
- Bayer, Evonik
- TaconicArtemis GmbH

**Membership in local and regional Networks**

- BioIndustry e.V., BioLAGO

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**Research Field**

- Life Science

**Keywords**

- Analytical, Biocatalysts
- Biomaterials
- Bioprocessing, DNA
- Drug Discovery/Delivery, Bioinformatics
- Biotechnology
- Nanotechnology, Biomimetics

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