Engineering Template

Name of University: TU Dortmund University

Country: Germany

Chance of placement: Excellent

Fields of Study Available

- Building Sciences (civil engineering, architecture)
- Engineering (chemical, mechanical, industrial, electrical)
- Mathematics (business, economics, general, statistics)
- Sciences (chemistry, mathematics, statistics, computer science, physics)
- Spatial Planning

Courses in English available: Yes

A list of the degree programs at TU Dortmund University can be found here: 

Here are the courses available in English:
- Process Systems Engineering (Master)
- Robotics and Automation (Master)
- Spatial Planning in Europe (Master)
- Manufacturing and Technology (Master)

Most courses are taught in German, but TU Dortmund University usually tries to find classes in the student’s field that are offered in English in the respective semester.

Special Features of campus (i.e. special laboratories, specialties):

The Fraunhofer Institute for Material Flow and Logistics

Modern research is interdisciplinary – a principle to which all TU Dortmund University faculties subscribe. This is especially visible in four profile areas.

In Production and Logistics, TU Dortmund University researchers develop innovative ideas for processing materials and shape the management of goods flows and production processes together with experts at the Fraunhofer Institute for Material Flow and Logistics.

Chemical Biology and Biotechnology, the second profile area, brings together several strong partners. Here, Germany's largest Faculty of Biochemical and Chemical Engineering, Dortmund's Max Planck Institute of Molecular Physiology, and the Faculty of Chemistry cooperate with other research institutions.
In the third profile area, **Modeling, Simulation and Optimization of Complex Processes and Systems**, computer scientists, mathematicians, statisticians, engineers and economists work together to model technical processes and economic developments.

**Collaborative Research Centers and Transregios (Speaker Function)**
- Integration of Forming, Cutting and Joining for the Flexible Production of Lightweight Frame Structures
- Adequate Interpretation of Intralogistic Systems - Logistics on Demand
- 3D-Surface Engineering of Tools for Sheet Metal Forming - Manufacturing, Modeling, Machining
- Statistical Modeling of Nonlinear Dynamic Processes
- Reduction of Complexity in Multivariate Data Structures (Transfer Unit)
- Design and Management of Complex Technical Processes and Systems by Means of Computational Intelligence Methods (Transfer Unit)
- Modeling of Large Logistics Networks (Transfer Unit)

**Participations in Collaborative Research Centers and Transregios**
- Process-Integrated Manufacturing of Functionally-Graded Structures Based on Coupled Thermo-Mechanical Phenomena
- Integrated Chemical Processes in Liquid Multiphase Systems - InPROMPT
- Manufacturing of Complex Functional Components with Variants by Using a New Sheet Metal Forming Process - Sheet-Bulk Metal Forming
- Shape Memory Technology: Fundamentals, Applications & Processing
- GTP- and ATP-Dependant Membrane Processes

**Research Units**
- Control and Protection Systems for Reliable and Secure Electrical Power Transmission

**Priority Programs**
- Intelligent Hydrogels
- Modelling, Simulation and Compensation of Thermal Effects from Complex Machining Processes
- Financial Market Imperfections and Macroeconomic Performance

**Leading-Edge Cluster**
- EffizienzCluster LogistikRuhr

**Central Scientific Institutions**
- DELTA-Center for Synchrotron Radiation of Technische Universität Dortmund
- Robotics Research Institute
- Sozialforschungsstelle Dortmund (Social Research Center)
- Center for Research on Higher Education and Faculty Development
- Dortmund Research and Development Center for Teaching, Learning and Professional Development
- Center for Further Education

**Affiliated Institutes**
In 2008, TU Dortmund University obtained research grants of more than 47 million Euros. This includes funding from the German Research Foundation (DFG) for several collaborative research centers, transregional collaborative research centers, research units and priority programs. In these programs, the Faculties of Mechanical Engineering, Biochemical and Chemical Engineering, and Statistics are particularly successful. Researchers use the grants to collaborate with innovative industrial partners and to conduct joint research at specialist facilities. TU Dortmund scientists are performing research at the CERN particle accelerator in Geneva and contribute to large-scale international education studies such as TIMMS.

The grants also support young scientists who come to TU Dortmund University for its exceptional PhD programs including DFG research training groups and NRW research schools.

Research/internship Opportunities:
TU Dortmund University participates in several short-term/summer internship programs funded by the DAAD, such as RISE, IAESTE and WISE. Research internships are also available alongside the studies, though they must be part of a semester-long curriculum.

Partnerships:
As a part of the UAMR (University Alliance Metropolis Ruhr), Germany's Academic Triangle, students may cross-enroll at the Universities of Bochum and Duisburg-Essen. Combined, all three universities form a network of 89,000 students, 1250 professors, and a unique diversity of disciplines. Since students can travel throughout the state of North Rhine-Westphalia free of charge, it is relatively easy to visit classes at another campus as well.

Syllabi/course descriptions:
Students can find information on the course catalogue here: [http://www.aaa.tu-dortmund.de](http://www.aaa.tu-dortmund.de) – International Students – Exchange Students (US-Exchange/ISEP/ECIU/Others) – Course Catalogue. Since course descriptions are not available in English in most cases, students are welcome to contact the International Office directly: exchange-students@tu-dortmund.de.

Ambassadors available to contact? exchange-students@tu-dortmund.de

Notes:
TU Dortmund University integrates natural and engineering sciences, business and economics, social sciences, humanities and teacher training, and offers strong and innovative programs in all major divisions. TU Dortmund University is one of the few German universities offering degree programs in Statistics, Journalism, and Mathematics for Business and Economics. The degree program in Spatial Planning has become one of the largest training centers of its kind in Europe, and the Dortmund Model for the Building Sciences links the often disparate fields of architecture and civil engineering. Particularly recommended for ISEP participants is a special program enabling them to combine language and culture courses with academic work in their major and minor subjects. The Department of English and American Studies has developed courses in comparative culture in which students from Germany and English-speaking countries learn together in intercultural classrooms.