International Summer University
German Engineering and Language

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summer@zv.tu-darmstadt.de
TU Darmstadt at a Glance

• Near Frankfurt (25 minutes by train/bus)
• One of Germany’s leading universities of technology
• 26,000 students
• 18% international students (from more than 120 countries)
• More than 300 partner universities all over the world
• Many industrial partners
International Summer University
German Engineering and Language

June 6 – July 16, 2022

Total Fee: € 2,500

Undergraduate Students

12 ECTS (6 US CP)

Virtual Period: June 6 – June 18
On-site Period: June 19 – July 16

Arrival Day: Sunday, June 19
Departure Day: Saturday, July 16

The total fee covers:
• language courses, course materials, workshops, engineering courses, intercultural practice, company visits, social activities and excursions
• public transportation ticket, health insurance and student services
• accommodation: shared twin room and kitchenette

Partial Scholarships available for nominated students of partner institutions from TU Darmstadt.

- 150 Hours Engineering Classes
  (Mechanical Engineering or Electrical Engineering)
- 100 Hours Intensive German Language Classes
- 50 Hours Cross-Cultural Competencies Training
- Excursions to German Companies/Cities

February 2022 | Technical University of Darmstadt | International Relations & Mobility | Virtual Info Session - International Summer University
The International Summer University at TU Darmstadt combines engineering courses, company visits, intensive German language courses, cross-cultural competencies training for engineers and social and cultural activities in and around Darmstadt.

<table>
<thead>
<tr>
<th>German Engineering</th>
<th>Germań Language &amp; Culture</th>
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<tbody>
<tr>
<td>6 ECTS</td>
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<tr>
<td>Mechanical Engineering</td>
<td>Electrical Engineering</td>
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**Total of 12 ECTS (6 US CP)**

Scan here for a detailed Syllabus
The various engineering courses introduce students to German engineering in the fields of Mechanical or Electrical Engineering through workshops and group projects. In the field of Mechanical Engineering, students can choose between Automotive Engineering, Aeronautical Engineering, Mechatronics and Production Engineering. In Electrical Engineering, two courses are offered: Electromagnetic Field Simulation and Microfluidics + BioMEMS. Students will also have the opportunity to gain insight into German engineering by visiting various companies.

<table>
<thead>
<tr>
<th>Mechanical Engineering (6 ECTS)</th>
<th>Electrical Engineering (6 ECTS)</th>
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<tbody>
<tr>
<td>Aeronautical Engineering (3 ECTS)</td>
<td>Microfluidics + bioMEMS (3 ECTS)</td>
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<tr>
<td>The course deals with the design, function and operation of wind tunnels and the use of laser-based measurement techniques in fluid mechanics, aerodynamics and flight mechanics.</td>
<td>This course gives an introduction to the field of microfluidic and microelectromechanical systems (MEMS) for a variety of applications in the biomedical sciences.</td>
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<tr>
<td>Automotive Engineering (3 ECTS)</td>
<td>Electromagnetic Field Simulation (3 ECTS)</td>
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<td>The course gives an introduction into automotive engineering by typical problems in this field.</td>
<td>The course gives an introduction into electromagnetic field simulation. The main course aspect is the finite integration technique (FIT) which is applied on Maxwell’s equations to compute numerically electromagnetic phenomena.</td>
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<tr>
<td>Production Engineering (3 ECTS)</td>
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<td>The aim of the course is to provide a deeper insight into the potentials and challenges of Industry 4.0 in the field of sheet metal forming.</td>
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<tr>
<td>Mechatronic Engineering (3 ECTS)</td>
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<td>The course deals with the basics of mechatronic systems and the involved components. Main aspects are the functional description and modelling of mechanical elements, actuators, sensors.</td>
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### German Language Courses (4 ECTS)

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<th>Course</th>
<th>Description</th>
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| German for Academic Purposes (Beginner)    | This online language course is designed especially for STEM-students who want to improve their prospective careers with a German language course. Here you will learn and practice:  
  - basic German communication skills  
  - essential German communication situations in STEM-relevant contexts. By the end of this course, you should be able to engage in basic communication situations. For students considering a semester abroad in Germany, this course may be interesting as well. |
| German for Academic Purposes (Beginner with previous knowledge) | You already have a basic knowledge of German, are interested in STEM and are considering a semester abroad at a German university? Then this course is exactly for you! You will increase  
  - your knowledge of German academic life and be able to communicate with German students on a basic level and learn  
    - to write basic formal emails to professors  
    - to practice important strategies for understanding academic texts. If you are considering a semester abroad, this course would be an excellent way for you to begin preparation. |
| German for Academic Purposes (Pre-Intermediate) | This pre-intermediate language course is designed to strengthen students' German speaking, writing and listening skills in an academic setting (STEM). You will be able  
  - to convey information and ideas on abstract as well as concrete topics  
  - to check information and ask about or explain problems with reasonable precision  
  - to reasonably fluently sustain a straightforward description of one of a variety of subjects of personal interest. By the end of the course, you should be able to communicate more effectively in an academic setting, with professors as well as with fellow students. |
Cross-Cultural Competencies Training for Engineers & Social and Cultural Programme (2 ECTS)

Cross-Cultural Competencies Training for Engineers

This seminar will train non-German students in intercultural skills to help them successfully navigate in an intercultural working and learning environment in Germany. It will also introduce students to practical techniques, skills and knowledge surrounding themes of living, studying and working in Germany.

The International Summer University will introduce students to practical techniques, skills and knowledge to help successfully arrange themselves within an intercultural working and learning environment throughout Germany.

Social and Cultural Programme

Expand your study abroad experience by attending our social and cultural activities in and around the Rhein-Main Hessen region.

All engineering courses as well as the Cross-Cultural Competencies Training for Engineers will be held in English. All course grades are based on continuous assessments throughout the course.

Scan here for a detailed Syllabus
Application Process

Students of Partner Universities of TU Darmstadt:

1. Please apply at/consult your universities’ international office for ISU 2022 at TU Darmstadt. Your international office will need to send an informal nomination to summer@zv.tu-darmstadt.de

2. We will confirm a successful nomination via email. Make sure to check your emails regularly.

   Your next steps will then be:
   1. Register with TU Darmstadt
   2. Pay the Programme Fee
   3. Receive a Letter of Acceptance

Students of Non-Partner Universities:

1. Please contact summer@zv.tu-darmstadt.de to state your interest in our programme.
   - Please make sure to inform us about your home university
   - Tell us your course of study

Students of UMass System, UW System, Queensland Universities:

If you are a student from the University of Massachusetts system, the University of Wisconsin system, and participating universities in Queensland you will participate as exchange students and will not pay fees directly to TU Darmstadt. Please contact your study abroad advisor for more information on how and when to apply.
Impressions of the last ISUs
Thank you for your attention!