



SUSTAINABLE ENERGY TECHNOLOGY



Sustainable Energy Technology Engineering Summer School

Our Summer School courses in Mechanical Engineering and Management offer international students the opportunity to take part in excellent science and research at RWTH Aachen University. The University is highly acclaimed internationally for its development of innovative answers to the most pressing global challenges. As a result, numerous research institutions, companies, R&D departments and start-ups have settled in and around Aachen, making RWTH the ideal setting for aspiring students.



Program Objective

This Summer School introduces the mathematical and physical basics of building energy performance modeling and simulation, implementation of models using computer-based numerical methods, computer algebra systems and object-oriented modeling language Modelica. Students will be able to better understand current and future challenges in sustainable energy technology.



Academic Staff

The academic content of this Summer School is taught by two visiting professors of TH Bingen, the E.ON Energy Research Center and the Institute of Energy Efficiency and Sustainable Building of RWTH Aachen University, as well as the Institute of Energy and Climate Research of Forschungszentrum Jülich. This threefold approach to teaching is unique among all of our Summer Schools.



Applicant's Profile

This program is specifically tailored for B.Sc./B.E. students enrolled at top universities. Applicants need proficient knowledge of the English language and should be studying Mechanical Engineering or a related field. Completion of the first academic year is mandatory. The minimum age to participate is 18 years.



Quickfacts

Study format	Summer School
Qualification	Certificate
Language	English
Course Fees	EUR 2,990
Duration	3 weeks
Workload	90 Teaching Units



Application Information

We will evaluate applications based on the cover letter, the completion of the special requirements of each program, the overall strength of your academic record, and extracurricular experiences.

*All Summer Schools are co-funded by the RWTH International Academy in cooperation with RWTH Aachen University.



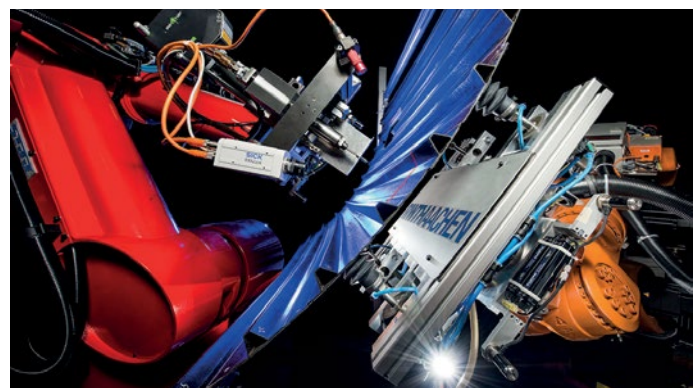
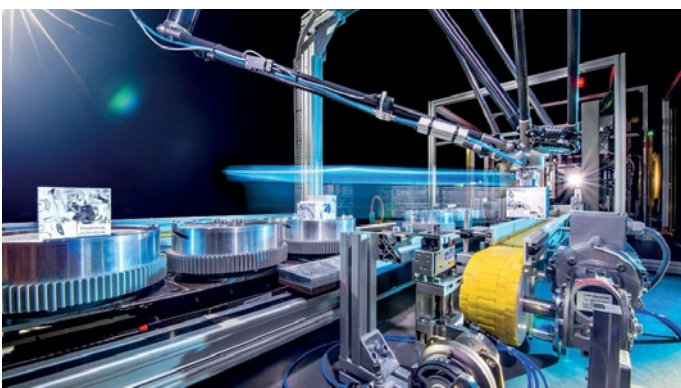
Academic Content

Modules: Lectures and Exercises	Teaching Units
Introduction to Sustainable Energy Technology	4
Energy Basics: The Self-Sustaining Building	2
Methods of Energy Supply for Buildings: Heating Demands for Buildings	2
The Campus Cube: The Assignment	4
Energy Trading & Power Plant Management	4
Energy Management & Transition	4
Demand Side Management	10
Building Performance Simulation	20
Power to X	4
High Temperature SOFCs	4
Sustainable Energy 4.0 - Digitalization, IoT, AI	4
Artificial Intelligence Applications in Sustainable Energy	4
Study Time	6
Final Exam	2
Modules: Company Visits and Culture	Teaching Units
Intercultural Workshop	4
Visit of the Center for Wind Power Drives	2
Visit of the E.ON Energy Research Center	2
Company Visits	8
Sum of Teaching Units	90



RWTH Aachen University

RWTH Aachen University is one of Germany's universities of excellence. It is a place where the future of our industrialized world is thought out. The university is proving to be a popular spot with increasing international recognition where innovative answers to global challenges are developed.



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