



**Ostfalia**  
University of  
Applied Sciences

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Faculty of Electrical Engineering and  
Information Technology

# International Summer University



Salzgitter · Suderburg · **Wolfenbüttel** · Wolfsburg

# International Summer University on Sustainable Energy Technologies Wolfenbüttel

This event is planned as an international student course covering an overview and applications of sustainable energy technologies mainly based on wind, sun and water. The participant will also get an impression of Germany and the region by attending compact presentations on history, geography and culture as well as visits to companies and places of interest.

## History, Culture, Industry

Where are we – some regional geography. A brief walk through 2000 years of European and German history from the Roman empire to the European Union of 27 nations including Caesar, Luther, Napoleon, Bismarck. The World Wars are reviewed, the Iron Curtain and developments since the reunion of Germany. This includes student trips to historic and modern sites. The regional industry like Volkswagen, a wind farm, power plants, a solar energy technology company and mining aspects are presented in parallel to the course program. City tours through the home town of the Ostfalia Wolfenbüttel, Hamburg and Bremen will be part of the schedule.

## Lectures on Sustainable Energy Technologies

The technical program starts with the introduction of "Wind Energy". Later on the first big student trip starts to Bremerhaven and Bremen in northern Germany near the coast of the North Sea and a visit to the Climate House (Klimahaus). The topic "Wind Energy" will be followed by the equally important focus of "Photovoltaics".

The program of the first week will be completed by the discussion of "Hydropower", "Geothermics" and "Solar Thermal and Heat Pumps" as well as "Building Energy Management". The second week's program offers several special examples and applications of the topic "Energy". Topics are "Climate Change", "Energy Renovation of Buildings". Also the discussion of electric vehicle charging and energy efficiency of electrical drives will be covered as well as the "Energy Efficiency of Power Transformers".

International Summer University 2024 - Schedule Week 1 - preliminary

Sunday 05.05.2024	Monday 06.05.2024	Tuesday 07.05.2024	Wednesday 08.05.2024	Thursday 09.05.2024 Ascension Day	Friday 10.05.2024	Saturday 11.05.2024
Arrival	Arrival	Wind Energy Könemund	Solar Thermal and Heat Pumps Hutzel	Klimahaus Bremerhaven	Photovoltaics Könemund	Geography, History and Economy Hamann
		Wind Energy Könemund	Building Energy Management Hutzel	Citytour Bremen	Photovoltaics Könemund	Examination Part 1
		Lunch	Lunch		Lunch	free
		Geothermics Ott	Hydropower Könemund		Geography, History and Economy Hamann	
	Guided city tour Wolfenbüttel	Wind Farm Dardesheim	Solvis Solar Energy Technology Braunschweig		free	
	Welcome Dinner Forsthaus				BBQ Party	

Guest lecturers from abroad and Professors from the Faculty of Electrical Engineering and Information Technology and other Faculties of Ostfalia University will assure an interesting and up to date course program, easy to understand and convenient also students from other programs of study.

The information content of first and the second weeks course program will be examined by some basic questions in a written test at the end of each week. The attending students will be trained for this during the course program itself. Only a very limited additional individual learning in the evenings is necessary, mostly no extensive preparation time during the course can be expected

### The Technical Staff

The courses are taught mainly by Professors of Electrical Engineering and Information Technology from Ostfalia, University of Applied Sciences, Wolfenbüttel, Germany and a guest lecturer from Finland as well as from the Purdue University in English language.

International Summer University 2024 - Schedule Week 2 - preliminary

Sunday 12.05.2024	Monday 13.05.2024	Tuesday 14.05.2024	Wednesday 15.05.2024	Thursday 16.05.2024	Friday 17.05.2024	Saturday 18.05.2024
Individual student trip to Berlin	Climate Change and Energy Storage Paronen	Factory Tour Airbus Hamburg	Energy Efficiency of Power Transformers Tepper	Electric Vehicle Charging Technology Siaenen	free	departure
	Energy Renovation of Buildings Paronen		Energy Efficiency of Power Transformers Tepper	Electric Vehicle Charging Technology Siaenen	Examination Part 2	
	Lunch		Lunch	Lunch	free	
	Energy Eff. of El. Drives Kulatunga		free	free		
	Energy Eff. of El. Drives Kulatunga		Factory tour Volkswagen and/or Autostadt Wolfsburg	Old Silver Mine Rammelsberg Goslar		
	free				Farewell Party	

## Lecturers from Ostfalia

Prof. Hamann: "Geography, History and Economy"

Prof. Könemund: "Wind Energy", "Photovoltaics", "Hydropower"

Prof. Siaenen: "Electric Vehicle Charging Technology"

Prof. Tepper: "Lightning Protection of Wind Turbines"

Prof. Ott: "Geothermics"

## Guest lecturers

Prof. Kulatunga, Purdue University: "Energy Efficiency of Electrical Drives"

Dr. Paronen, Finninvent, Finland: "Climate Change and Energy Storage", "Energy Renovation of Buildings"

Prof. Hutzler, Purdue University: "Solar Thermal and Heat Pumps", "Building Energy Management"

The whole program is finalized with the mentioned two written tests to achieve a certificate of completion. Please contact your home university about the acceptance as course credits.



### Germany (Deutschland)

in the heart of Europe, about 80 Million citizens, about 500 miles from the North Sea to the Alps mountains.

### Wolfenbüttel

historic town in northern Germany, 52000 citizens, historic castle and library, south of the city of Braunschweig, west of Berlin.

### Ostfalia, University of Applied Sciences

local campus of the regional university, here mainly engineering study programs, e.g. electrical engineering and information technology, mechanical engineering or computer science; more than 10.500 students total (all campuses); more than 600 in the Faculty of Electrical Engineering and Information Technology.

# General Information

## Admission Requirements

- registered student in a university-level institution
- basic background knowledge in electrical or mechanical engineering is helpful but not a precondition. The course should be interesting also for students from other programs of study
- language capability: courses held in English language

## Course Duration

- two weeks starting Monday, May 6th (arrival Sunday May 5th, and ending Friday, May 17th (departure Saturday May 18th).
- full day program including lectures (90 min blocks), company visits, cultural program, local travel.

## Course Qualification

The course program ends with written tests leading to a qualified certificate of completion. The home university may award credits. Please contact the local partners for details.

## Deadlines for Applications

Registration starts Dec. 1st, 2023 until Feb. 29th, 2024 at the local representative.

## Prices

Course fee is 990 Euro. It includes accommodations, most meals, local transportation and entrance fees including two full day excursions (Bremerhaven, Hamburg) plus free train tickets to Berlin on weekend.

## Contacts

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