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Hochschule Anhalt
Anhalt University of Applied Sciences

Photovoltaics Engineering Science

Department 6
of Electrical, Mechanical and Industrial Engineering

Campus Köthen

https://www.hs-anhalt.de/mpv

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MASTER OF SCIENCE

Version: MPV-2-16/10/2019

Department of Electrical, Mechanical and Industrial Engineering

Campus Köthen

Master of Science

Photovoltaics Engineering Science

According to most technological and economic forecasts, photovoltaics (PV) will play a major role in the future worldwide supply of electrical energy, especially under the aspect that the goals of the world climate protection process have to be reached. Photovoltaics is an inherently green energy with almost zero carbon footprint during energy generation and a footprint in the production of solar modules comparable to other industrial or consumer goods. Due to the long lifetime of solar modules of 30 years and more, the total carbon footprint of this technology is much lower than that of traditional electrical power generation by burning coal, oil or gas. Together with other renewables, photovoltaics will be a key technology in the development of a sustainable world energy supply.

SKILLS ACQUIRED

The master program is aiming at teaching all technical skills needed for a successful career in the PV industry, especially in design, construction, operation or management of PV power plants, of which a huge amount will have to be built in the next few decades worldwide, in order to reach the world climate targets, to which mankind has committed itself. These skills comprise a wide range from understanding the physical processes in a solar cell to developing a concept for a large-scale solar power plant.

MAJOR FIELDS OF STUDY

- Physics of the Solar Cell
- Crystalline and Thin Film Solar Cells
- Solar Modules and Components
- System Design, Monitoring, Yield and Performance Analysis
- Solar Cell and System Reliability
- Storage Systems, Electric Grids and Solar Energy Integration

PROGRAM DURATION

3 semesters (90 Credits)

START OF PROGRAM

Winter or summer semester

CAREER PROSPECTS

Graduates of the Master program Photovoltaics Engineering Science will be qualified to work as engineers in research and development, design, construction, operation or management of photovoltaic power plants. Due to the forecast strong increase of photovoltaic power generation, especially in the sunrich countries around the world, excellent job perspectives are expected. Therefore this program is especially well suited for students from countries, in which PV is currently strongly growing, and who want to participate in this process after having graduated. It is not suited for students, who are looking for a career start in Germany, because - although Germany is still a leading nation in research and development in PV - most of the production has meanwhile moved to the Far East, and the installation of big new PV power plants to the sunrich countries all over the world.