

t.EREN2 - Erneuerbare Energien 2

Person responsible for the course: Franz Baumgartner, bauf

Credits: 4

Valid for: 2010/2011

Last saved: 03.09.2010 17:24

Learning objectives:

The students know the technical principles of the electricity generation by the use of renewable energy sources.

In Photovoltaic PV they have deep insight into: the function principle of different solar cell technologies, industrial production processes, electrical modeling, and performance changes in real outdoor climate, PV inverter and PV plant design. They know the basic components of today's electricity grid like, generator, transformer, DC and AC distribution grid. They are also aware about problems of instability in the grid due to intermittent electricity production of some of the renewable power plants and techniques to overcome this hurdles.

Course content:

Generation of renewable electricity and their distribution

* Overview of renewable electricity generation techniques

* Photovoltaic

* Basics of the AC Grid (Generator, Transformer, DC AC distribution lines, power control)

* Facts about intermittent renewable electricity generation

* Electricity storage

* SMART Grids

Previous knowledge:

Basics in electrical engineering

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	10*4
Tutorial/Practicum	5*4
Group teaching	
Block instruction	
Seminar	

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

Number	Type	Weighting
1	End of term exam	60%
	Exam during the semester	20%
	Further assessments	20%

Language of instruction:

-

Instruction material:

PDF documents, conference proceedings, photovoltaic software planning tools

Comments:

-