Technische
Hochschule
Rosenheim

Renewable Energies
(taught in English)

Modul Number:	AW-0 0 6760.M
Lecturer:	Prof. Dr.-Ing. Karl-Heinz Stier
ECTS-credits:	5
Workload: (1 ECTS = 30 h)	150 h (approx. 60 class and 90 self-study)
Contact hours (SWS):	4 hours per week (3 of lectures, 1 of practical exercises)

Learning objectives: The Students know the basics of environmental engineering and relevant technologies. They are familiar with technologies for renewable energy generation and techniques of efficient energy usage.
They are able to identify current environmental problems and define possible solutions to be applied in practice.

Content: Basics of environmental issues and resource management as well as technologies for renewable energy generation and efficient energy usage. After a general overview, the current status of individual technologies is considered in detail. The basic knowledge of different technologies provided shall qualify the students to be employed in the corresponding professional branch.

- Current energy and environment situation
- Photovoltaic and photovoltaic facilities
- Solar thermal power plants
- Wind power, hydropower
- Geothermal energy
- Solar thermal energy
- Biomass, etc.

Language of instruction: English

Requirements: English level B2

<u>Material:</u>	Quaschning, V., Regenerative Energiesysteme, Hanser, 6. Auflage 2009
	Quaschning, V., Erneuerbare Energien und Klimaschutz, Hanser, 2008
	Hadamovsky, H.-F., Jonas, D.: Solarstrom, Solarthermie Vogel Buchverlag, 1. Auflage 2004
	Häberlin, H.: Photovoltaik, AZ-Verlag, 1. Auflage 2007
	Kaltschmidt, M., Streicher, W., Wiese, A.: Renewable Energy – Technology, Economics and Environment, Springer-Verlag, 1. Auflage 2007
<u>Participants:</u>	Max. 25
<u>Examination:</u>	Written examination
	Students have the possibility to give a topic related presentation (group with 2-4 participants) as a preliminary examination. The presentation is voluntary and is valid up to 10 % of the examination points of the final examination.