



Course number: IPE 10522
Sustainable Management of Resources
Study Level: Master / Graduate

Prof. Dr. da Silva, Prof. Dr. Meng
Language of Instruction: English
ECTS Credits: 6

Objectives:

- Ability to choose and pre-design sources of renewable power considering local loads and constraints
- Capability to choose, pre-design and specify an electricity storage system
- Capability to pre-design systems using locally available renewable resources and systems for water or flood protection
- Competence to plan and install a load monitoring
- Ability to implement energy management along ISO 50 001

Content:

- Decentral power generation with hydropower, photovoltaic, small wind and biomass
- Distribution and storage of renewable electrical energy, power2X, super caps, li-ion-batteries
- Monitoring and load management
- Energy management following ISO 50 001
- Water protection
- Flood protection

Lecture includes necessary fundamentals on solar radiation. Assessment of this course is based on a presentation, a report and a written exam.