pre371 - Distributed Generation

<table>
<thead>
<tr>
<th>Module label</th>
<th>Distributed Generation</th>
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<tbody>
<tr>
<td>Module code</td>
<td>pre371</td>
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<tr>
<td>Credit points</td>
<td>2.0 KP</td>
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<tr>
<td>Workload</td>
<td>60 h</td>
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<tr>
<td>Used in course of study</td>
<td>Master's Programme European Master in Renewable Energy (EUREC) &gt; Mastermodule</td>
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<td>Contact person</td>
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**Skills to be acquired in this module**

- be able to manage theoretical aspects related to power distribution, stability and quality
- become familiar with the basic theory and practical knowledge about the electric energy
- get basic knowledge on supply guarantee and power quality topics
- get basic knowledge on stability issues
- know the main effects of the introduction of Renewable Energies into the electric grid
- become familiar with the substations principles
- get knowledge about the concept of distributed generation and its implications
- will be able to demonstrate in-depth knowledge of Power Systems operations and Distributed Generation integration in existing grids
- be able to work effectively as professionals and as team members in order to solve technical problems
- be able to demonstrate their abilities to communicate effectively in multinational teams

**Module contents**

- Introduction to electric grid
- Security of supply and grid quality
- Stability
- Electric circuits analysis
- Renewable energy impact on the grid
- Laboratory classes (three-phase systems)
- Laboratory classes (reactive energy compensation)
- Models or patterns of consumption. Response / Demand Management
- Basic concepts of power electronics

**Reader’s advisory**

- M.Paz Comech, M. García-Gracia: Tecnología eléctrica.

**Links**

- Language of instruction: English
- Duration (semesters): 1 Semester
- Module frequency: jährlich
- Module capacity: unlimited
- Modulelevel: MM (Mastermodul)
- Modulart: Pflicht
- Lern-/Lehrform / Type of program: Lecture, Laboratory, Excursion

**Examination**

- Time of examination: After end of lectures of module
- Type of examination: Written exam (95%): 2 hours
- Subject’s work (5%): approx. 4 hours
  (Subject’s work refers to the different assignments that students are asked to finish after a preliminary session during the lessons)

**Course type**

- Seminar

**SWs**

- Frequency
- Workload attendance: 0 h