Master study course Renewable Energy Systems (M. Eng.)

<table>
<thead>
<tr>
<th>Module – No.</th>
<th>866</th>
<th>Compulsory module</th>
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<tbody>
<tr>
<td>Module name</td>
<td>Climate Change</td>
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<tr>
<td>Module coordinator</td>
<td>Prof. Dr.-Ing. Joachim Fischer</td>
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<tr>
<td>Title</td>
<td>Climate Change</td>
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<tr>
<td>Title of examination</td>
<td>Climate Change</td>
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<tr>
<td>Semester</td>
<td>1</td>
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<tr>
<td>Course type</td>
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<td>Lecture</td>
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<tr>
<td>Language</td>
<td>English</td>
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<tr>
<td>SWS/ ECTS/ Workload</td>
<td>4 V</td>
<td>5</td>
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<tr>
<td>Requirements for attendance</td>
<td>Successfully completed technical study course (e.g. Bachelor of Engineering)</td>
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1. Content and objectives

Objective
This lecture looks at the issue of climate change. It discusses the phenomenon of climate change and the underlying scientific, ecological, and economic issues. It also analyses climate change processes, and assesse proposed policy measures.

Module content:
- Our climate system - Fundamentals
- Physics of the climate system
- Climatic dynamics
- Climate Modelling and Types of Climate Models
- Natural and anthropogenic climate change
- The climate of the future
- Impacts, vulnerability, adaptation

On-line Lecture notes and training material will be available.

Recommended Literature:
Andrew Dessler: Introduction to Modern Climate Change, 2nd ed., Cambridge University Press; 2015

Learning goals:
After successfully completing the module, students have a deeper knowledge about the natural scientific fundamentals of our climate system. They learn about the significant effects influencing this system and the impacts linked with climate change. In addition, they are able to assess critically policy measures and existing studies on climate change.

2. Method(s) of instruction

Lecture

3. Requirements for attendance

No course specific requirements

4. Usability of this module

The module is offered as compulsory course in the master study course „Renewable Energy Systems“ (M.Eng.)

5. Requirements for assessment

- Assessment is performed as a group work with a final oral presentation and a written essay.
- Students need to pass the module examination, based on the presentation and the written essay.

6. ECTS credits

- 5 ECTS credits

7. Frequency of offer

- Annually in the spring semester

Stand: 25.03.18
8. Work load

150 h of total work load, therefrom
- 80 h of presence at lectures
- 30 h of self-study
- 40 h preparation for examination (essay and presentation)

9. Duration of module

1 semester