<table>
<thead>
<tr>
<th>Semester</th>
<th>Frequency</th>
<th>Duration</th>
<th>Type</th>
<th>ECTS points</th>
<th>Student workload</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Semesterly</td>
<td>1 Sem.</td>
<td>Mandatory</td>
<td>6</td>
<td>150 hours, comprising contact hours: 6 h self study: 144 h</td>
</tr>
</tbody>
</table>

### Prerequisites for participation
- M.Sc. IMM

### Examination type and duration
(Prerequisite for transferal of ECTS)
- Course achievement (Studienleistung): computer test; Examination (Prüfungsleistung): home assignment

### Teaching and learning methods
Course book, self study, discussion in bulletin board

### Unit coordinator
Prof. Ralf Brauner

## Learning objectives
Upon completion of this learning unit, students are able to …

- explain climate changes and evaluate the consequences for the maritime industries.
- compare and interpret collected data of research studies.
- sequence and categorise information of issues related to green shipping.
- understand the basic principles relating to the technical structure of ports and ships.
- describe, evaluate and communicate the impact of research and other accomplishments in green shipping.

## Unit contents
- Climate of the ocean and atmosphere and consequences for climate change
- Green ship and ports requirements and legislation
- Emissions of ships and ports to the atmosphere and ocean
- Reduction in emissions and efficiency related to ships and ports
- Environmental aspects, economics and sustainability
- Risk management

## Lectures
<table>
<thead>
<tr>
<th>Lecturer(s)</th>
<th>Name of learning unit</th>
<th>Weekly lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Ralf Brauner</td>
<td>Green Shipping</td>
<td>-</td>
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</table>