<table>
<thead>
<tr>
<th>Study course:</th>
<th>Master’s Program Computational Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module name:</td>
<td>CE-W03: Case Study B</td>
</tr>
<tr>
<td>Abbreviation, if applicable:</td>
<td>-</td>
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<tr>
<td>Sub-heading, if applicable:</td>
<td>-</td>
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<tr>
<td>Module Coordinator(s):</td>
<td>All lecturers of the course</td>
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<tr>
<td>Classification within the Curriculum:</td>
<td>Master’s Program Computational Engineering: optional course.</td>
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<tr>
<td>Courses included in the module, if applicable:</td>
<td>-</td>
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<tr>
<td>Semester/term:</td>
<td>2nd Semester / Summer term or 3rd Semester / Winter term</td>
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<td>Lecturer(s):</td>
<td>Professors and Assistants of the course</td>
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<tr>
<td>Language:</td>
<td>English</td>
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<td>Requirements:</td>
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**Teaching format / class hours per week during the semester:**
The topic of a project paper is formulated by a lecturer of the course or an assistant who supervises the exercises. The student - or a small group of students - conducts a project independently and presents the results in the form of a written report and optionally, an oral presentation (upon agreement with the respective lecturer).

**Study/exam achievements:**
The project paper and presentation will be graded. For this purpose, the individual achievements of the students within the project groups are separately evaluated.

The evaluation includes:
- Written project paper / 75% (100% without a final presentation)
- Final presentation / 25% (optional)

**Forms of media:**
Independent work in seminar rooms and computer labs; testing plants, where applicable.

**Workload [h / LP]:**
| 90 / 3 |

**Thereof face-to-face teaching [h]:**
- |

**Preparation and post processing (including examination) [h]:**
- |

**Credit points:**
3
**Learning goals / competences:**

Project work allows students to work on a problem individually or in small groups. Project groups organize and coordinate the assignment of tasks independently, while the lecturers take the role of both an advisor and supervisor of the respective project. Further, they check the students’ results at regular intervals. After completion of the project, the students should present their results before the class. The necessity of such a presentation should, however, be agreed upon with the respective supervisor.

Project work serves to qualify students to structure Computational Engineering problems, to solving them in teams, and to illustrate the results in the form of a report and a presentation. After completion of the project, the students should have gathered new information and insights into the activities of practicing engineers while acquiring skills in innovative research fields. In the end, the students will be able to present technical projects, and to develop problem solution strategies and will hence also obtain worthwhile communication skills.

**Contents:**

The project topic is usually determined by the respective lecturer or one of his/her assistants. In addition to this, students may also conduct project work on topics defined by companies from industry or official authorities. However, the project work must be completed under the supervision of one of the course’s lecturers.

The projects are usually devised so as to integrate interdisciplinary aspects such as

- Noticing problems and describing them
- Formulating envisaged goals
- Team-oriented problem solutions
- Organizing and optimizing one's time and work plan
- Interdisciplinary problem solutions
- Literature research and evaluation as well as the consultation of experts
- Documentation, illustration and presentation of results

**Literature:**

The relevant literature will be announced along with the project topic.