### Spacecraft System Analysis

**Module title:** Spacecraft System Analysis  
**Abbreviation:** 10-I=SSA-182-m01

**Module coordinator:** holder of the Chair of Computer Science VII  
**Module offered by:** Institute of Computer Science

**ECTS:** 10  
**Method of grading:** numerical grade  
**Only after succ. compl. of module(s):** --

**Duration:** 1 semester  
**Module level:** graduate  
**Other prerequisites:** --

### Contents

Spacecraft system Analysis examines the design of spacecraft and launch vehicles, including the impacts of the atmosphere and the space environment on requirements and configurations. The principles and design aspects of the structure, propulsion, power, thermal, communication, and control subsystems are studied.

### Intended learning outcomes

Students gain a general understanding of orbital mechanics & parameters and the subsystems of a spacecraft. This course handles the most important subsystems individually as listed in the table of contents. At the end of the course students will learn to translate mission requirements into orbit and subsystem definitions. Thermal and Mechanical qualification including testing for space is additionally covered.

### Courses

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of weekly contact hours</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>V (4) + Ü (2) + E (2)</td>
<td>Module taught in: English</td>
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### Method of assessment

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope</th>
<th>Language</th>
<th>Examination offered</th>
<th>Information on whether module is creditable for bonus</th>
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<tbody>
<tr>
<td>written examination (approx. 90 to 120 minutes) and field trip report (4 to 8 pages)</td>
<td>Language of assessment: English</td>
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### Allocation of places

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### Additional information

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### Referred to in LPO I

(Examination regulations for teaching-degree programmes)

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### Module appears in

Master's degree (1 major) Satellite Technology (2018)