Module title | Abbreviation
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Lie Theory | 10-M=ALTHín-152-m01

Module coordinator | Module offered by
Dean of Studies Mathematik (Mathematics) | Institute of Mathematics

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Method of grading</th>
<th>Only after succ. compl. of module(s)</th>
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<tbody>
<tr>
<td>10</td>
<td>numerical grade</td>
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<tr>
<th>Duration</th>
<th>Module level</th>
<th>Other prerequisites</th>
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<td>1 semester</td>
<td>graduate</td>
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Contents
Linear Lie groups and their Lie algebras, exponential function, structure and classification of Lie algebras, classic examples, applications, e.g. in physics and control theory.

Intended learning outcomes
The student is acquainted with the fundamental results, theorems and methods in Lie theory. He/She is able to apply these to common problems, and knows about the interactions of group theory, analysis, topology and linear algebra.

Courses
(V (4) + Ü (2)) Module taught in: English

Method of assessment
a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate)
Assessment offered: In the semester in which the course is offered and in the subsequent semester
Language of assessment: English

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) Mathematics International (2015)
Master’s degree (1 major) Physics International (2020)
Master’s degree (1 major) Mathematics International (2021)