

|   |                          |   |
|---|--------------------------|---|
| <b>Module title</b>   |                          | <b>Abbreviation</b>                         |
| Groups and their Representations  |                          | 10-M=VGDSin-152-m01                         |
| <b>Module coordinator</b>   |                          | <b>Module offered by</b>                    |
| Dean of Studies Mathematik (Mathematics)  |                          | Institute of Mathematics                    |
| <b>ECTS</b>   | <b>Method of grading</b> | <b>Only after succ. compl. of module(s)</b> |
| 10  | numerical grade          | --  |
| <b>Duration</b>   | <b>Module level</b>      | <b>Other prerequisites</b>                  |
| 1 semester  | graduate                 | --  |
| <b>Contents</b>   |                          |   |
| Finite permutation groups and character theory of finite groups, interrelations and special techniques such as the S-rings of Schur.  |                          |   |
| <b>Intended learning outcomes</b>   |                          |   |
| The student masters advanced algebraic concepts and methods. He/She gains the ability to work on contemporary research questions in group theory and representation theory and can apply his/her skills to complex problems.  |                          |   |
| <b>Courses</b> (type, number of weekly contact hours, language – if other than German)  |                          |   |
| V (4) + Ü (2)<br>Module taught in: English  |                          |   |
| <b>Method of assessment</b> (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)  |                          |   |
| 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)<br>Assessment offered: In the semester in which the course is offered and in the subsequent semester<br>Language of assessment: English<br>creditable for bonus |                          |   |
| <b>Allocation of places</b>   |                          |   |
| --  |                          |   |
| <b>Additional information</b>   |                          |   |
| --  |                          |   |
| <b>Workload</b>   |                          |   |
| 300 h   |                          |   |
| <b>Teaching cycle</b>   |                          |   |
| --  |                          |   |
| <b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)  |                          |   |
| --  |                          |   |
| <b>Module appears in</b>  |                          |   |
| Master's degree (1 major) Mathematics International (2015)<br>Master's degree (1 major) Physics International (2020)<br>Master's degree (1 major) Mathematics International (2021)<br>Master's degree (1 major) Mathematics International (2022)<br>Master's degree (1 major) Physics International (2024)  |                          |   |