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| Module title | | Abbreviation |
| Introductory Algebra for Teaching Degree (German Gymnasium) | | 10-M-ALGL-191-m01 |
| Module coordinator | | Module offered by |
| Dean of Studies Mathematik (Mathematics) | | Institute of Mathematics |
| ECTS | Method of grading | Only after succ. compl. of module(s) |
| 5 | (not) successfully completed | -- |
| Duration | Module level | Other prerequisites |
| 1 semester | undergraduate | -- |
| Contents | | |
| <p>Topics in Group Theory (particularly finite abelian groups, normal subgroups, sub- and factorgroups, isomorphism theorems, solvability, group operations, Sylow theorems; examples: cyclic groups, alternating and symmetric groups, dihedral groups).</p> <p>Topics in ring theory (particularly ideals, divisibility, polynomial rings, irreducibility of polynomials).</p> <p>Topics in number theory (particularly Euclidean algorithm, Fermat's little theorem, Euler's theorem, Chinese remainder theorem, residue class rings and their unit groups, quadratic number rings).</p> | | |
| Intended learning outcomes | | |
| The student knows and masters the essential methods and basic notions in algebra. He/She is acquainted with the central concepts in this field, and is able to apply the fundamental proof methods independently. | | |
| Courses (type, number of weekly contact hours, language — if other than German) | | |
| Ü (2) | | |
| Method of assessment (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 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus | | |
| Allocation of places | | |
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| Additional information | | |
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| Workload | | |
| 150 h | | |
| Teaching cycle | | |
| -- | | |
| Referred to in LPO I (examination regulations for teaching-degree programmes) | | |
| § 73 I Nr. 2 (2 LP), § 73 I Nr. 5 (3 LP) | | |
| Module appears in | | |
| First state examination for the teaching degree Gymnasium Mathematics (2019) First state examination for the teaching degree Gymnasium Mathematics (2023) | | |
| JMU Würzburg • generated 29.03.2024 • Module data record 110066 | | |