### Module title
Overview Algebra and Discrete Mathematics

### Abbreviation
10-M-ALDI-Ü-152-m01

### Module coordinator
Dean of Studies Mathematik (Mathematics)

### Module offered by
Institute of Mathematics

### ECTS
12

### Method of grading
numerical grade

### Only after succ. compl. of module(s)
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### Duration
1 semester

### Module level
undergraduate

### Other prerequisites
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### Contents
Fundamental algebraic structures (groups, rings, fields), Galois theory; techniques from combinatorics, introduction to graph theory (including applications), cryptographic methods, error-correcting codes.

### Intended learning outcomes
The student is acquainted with fundamental concepts and methods in algebra and discrete mathematics. He/She is able to relate these concepts with one another, and realises the advantages of thinking across the borders of different branches in mathematics.

### Courses
(type, number of weekly contact hours, language — if other than German)

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<th>Type</th>
<th>Number of Contact Hours</th>
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### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

oral examination of one candidate each (20 to 40 minutes)

Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).

Language of assessment: German and/or 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
Bachelor’ degree (1 major) Mathematics (2015)
Bachelor’ degree (1 major) Computational Mathematics (2015)