## Module title
Introductory Discrete Mathematics for Teaching Degree (German Gymnasium)

### Abbreviation
10-M-DIML-152-m01

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

### Module offered by
Institute of Mathematics

### ECTS
6

### Method of grading
Only after succ. compl. of module(s)

### (not) successfully completed
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### Duration
1 semester

### Module level
undergraduate

### Other prerequisites
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### Contents
Techniques from combinatorics, introduction to graph theory (including applications), cryptographic methods, error-correcting codes.

### Intended learning outcomes
The student is acquainted with the fundamental concepts and results in discrete mathematics, masters the relevant proof techniques, is able to apply methods from number theory and algebra to discrete mathematics and realises the scope of applications of discrete structures.

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

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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)

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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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

§ 73 I Nr. 3 (3 ECTS credits)
§ 73 I Nr. 5 (3 ECTS credits)

### Module appears in
First state examination for the teaching degree Gymnasium Mathematics (2015)