### Number Theory

- **Abbreviation**: 10-M=AZTH-161-m01

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

**Module offered by**
Institute of Mathematics

**ECTS**
10

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

**Numerical grade**
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**Duration**
1 semester

**Module level**
graduate

**Other prerequisites**
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### Contents
Number-theoretic functions and their associated Dirichlet series resp. Euler products, their analytic theory with applications to prime number distribution and diophantine equations; discussion of the Riemann hypothesis, overview of the development of modern number theory.

### Intended learning outcomes
The student is acquainted with the fundamental methods of analytics number theory, can deal with algebraic structures in number theory and knows methods for the solution of diophantine equations. He/She has insight into modern developments in number theory.

### Courses
- **V (4) + Ü (2)**
- Module taught in: German and/or 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: German 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)
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### Module appears in
- Master's degree (1 major) Mathematics (2016)
- Master's degree (1 major) Physics (2016)
- Master's degree (1 major) Mathematical Physics (2016)
- Master's degree (1 major) Computational Mathematics (2016)
- Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
- Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
- Master's degree (1 major) Computational Mathematics (2019)
- Master's degree (1 major) Mathematics (2019)
- Master's degree (1 major) Physics (2020)
- Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)
- Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)
- Master's degree (1 major) Mathematical Physics (2020)