Module title
Introduction into Number Theory for Teaching Degree Mathematics (German Gymnasium)

Abbreviation
10-M-ZTL-122-m01

Module coordinator
Dean of Studies Mathematik (Mathematics)

Module offered by
Institute of Mathematics

ECTS
4

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

Duration
1 semester

Module level
undergraduate

Other prerequisites
Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew.

Contents
Elementary properties of divisibility, prime numbers and prime number factorisation, modular arithmetics, prime tests and methods for factorisation, structure of the residue class rings, theory of quadratic remainder, quadratic forms, diophantine approximation and diophantine equations.

Intended learning outcomes
The student is acquainted with the basic concepts of number theory.

Courses
V (no information on SWS (weekly contact hours) and course language available)

Method of assessment
項目 assignments (type and expenditure of time to be specified by the lecturer at the beginning of the course)
Language of assessment: German, English if agreed upon with the examiner

Allocation of places
--

Additional information
--

Referred to in LPO I (examination regulations for teaching-degree programmes)
§ 73 (1) 2. Mathematik Lineare Algebra, Algebra und Elemente der Zahlentheorie

Module appears in
First state examination for the teaching degree Gymnasium Mathematics (2012)