**Module title**
Algebraic Geometry

**Abbreviation**
10-M=VAGEin-211-m01

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

**Module offered by**
Institute of Mathematics

**ECTS**
10

**Method of grading**
Numerical grade

**Duration**
1 semester

**Module level**
Graduate

**Other prerequisites**
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**Contents**
Affine and projective space, affine and projective varieties, morphisms and rational maps; function fields, divisors and Riemann-Roch theorem for curves; genus, singularities and Plücker formula; dual curve, dual surface; Bezout's theorem; Grassmann and flag varieties; 27 lines in a cubic surface.

**Intended learning outcomes**
The student is acquainted with fundamental concepts, methods and results in algebraic geometry, is able to classify these results within more general theories and knows about the connections of algebraic geometry with other fields of mathematics.

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

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<th>Type</th>
<th>Number of Weekly Contact Hours</th>
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**Module taught in:**
English

**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 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)

Language of assessment: English

Assessment offered: Only when announced in the semester in which the courses are offered and in the subsequent semester 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 International (2021)