

<b>Module title</b>		<b>Abbreviation</b>
Introduction to Geometry		10-M-GEO-o82-mo1
<b>Module coordinator</b>		<b>Module offered by</b>
Dean of Studies Mathematik (Mathematics)		Institute of Mathematics
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
8	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	undergraduate	By way of exception, additional prerequisites are listed in the section on assessments.
<b>Contents</b>		
Introduction to topics in geometry: axiomatic introduction of projective spaces, coordinates, fundamental theorems, relations to linear algebra and algebra, curves and hypersurfaces in Euclidean spaces, curvature.		
<b>Intended learning outcomes</b>		
The student is acquainted with the fundamental concepts and methods of geometry.		
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)		
This module has 2 components; information on courses listed separately for each component. <ul style="list-style-type: none"> <li>• 10-M-GEO-1-o82: V + Ü (no information on language and number of weekly contact hours available)</li> <li>• 10-M-GEO-2-o82: V + Ü (no information on language and number of weekly contact hours available)</li> </ul>		
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
This module has the following 2 assessment components. To pass the module as a whole students must pass one of the two assessment components.		
<p><b>Assessment component to module component 10-M-GEO-1-o82: Einführung in die Projektive Geometrie</b></p> <ul style="list-style-type: none"> <li>• 8 ECTS credits, method of grading: numerical grade</li> <li>• written examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)</li> <li>• Language of assessment: English, German if agreed upon with the examiner</li> <li>• Other prerequisites: Admission prerequisite to assessment: successful completion of approx. 50% of exercises. 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.</li> </ul> <p><b>Assessment component to module component 10-M-GEO-2-o82: Einführung in die Differentialgeometrie</b></p> <ul style="list-style-type: none"> <li>• 8 ECTS credits, method of grading: numerical grade</li> <li>• written examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)</li> <li>• Language of assessment: English, German if agreed upon with the examiner</li> <li>• Other prerequisites: Admission prerequisite to assessment: successful completion of approx. 50% of exercises. 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.</li> </ul>		

<b>Allocation of places</b>
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<b>Additional information</b>
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<b>Workload</b>
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<b>Teaching cycle</b>
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)
§ 73 (1) 4. Mathematik Geometrie
<b>Module appears in</b>
<p>Bachelor' degree (1 major) Mathematics (2008)            Bachelor' degree (1 major) Economathematics (2009)            Bachelor' degree (1 major) Economathematics (2008)            Bachelor' degree (1 major) Mathematical Physics (2009)            Bachelor' degree (1 major) Computational Mathematics (2009)            Bachelor's degree (1 major, 1 minor) Mathematics (Minor, 2008)            First state examination for the teaching degree Gymnasium Mathematics (2009)</p>