Module title
Selected Topics from Mathematics for Teaching Degree Mathematics (German Gymnasium)

Abbreviation
10-M-ELG-122-m01

Module coordinator
Dean of Studies Mathematik (Mathematics)

Module offered by
Institute of Mathematics

ECTS
8

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

Duration
2 semester

Module level
undergraduate

Other prerequisites
By way of exception, additional prerequisites are listed in the section on assessments.

Contents
An additional lecture in pure or applied mathematics which is not covered in the mandatory courses of the teaching degree programme Gymnasium.

Intended learning outcomes
The student is acquainted with advanced concepts and methods in pure or applied mathematics. Based on these fundamental mathematical concepts and methods he/she is able to pursue further studies.

Courses
This module has 3 components; information on courses listed separately for each component.
- 10-M-GAN-1-122: V + Ü (no information on language and number of weekly contact hours available)
- 10-M-FAN-1-122: V + Ü (no information on language and number of weekly contact hours available)
- 10-M-ORS-1-122: V + Ü (no information on language and number of weekly contact hours available)

Method of assessment
This module has the following 3 assessment components. To pass the module as a whole students must pass one of the three assessment components.

Assessment component to module component 10-M-GAN-1-122: Geometrische Analysis
- 8 ECTS credits, method of grading: (not) successfully completed
- written examination (approx. 90 to 180 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). Module will also be considered successfully completed if the module component was selected as subject of the oral examination covering several modules (separate module component for assessment purposes (Prüfungsteilmodul)) and this examination was passed.
- Language of assessment: English, German if agreed upon with the examiner
- 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.

Assessment component to module component 10-M-FAN-1-122: Einführung in die Funktionalanalysis
- 8 ECTS credits, method of grading: (not) successfully completed
- written examination (approx. 90 to 180 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). Module will also be considered successfully completed if the module component was selected as subject of the oral examination covering several modules (separate module component for assessment purposes (Prüfungsteilmodul)) and this examination was passed.
- Language of assessment: English, German if agreed upon with the examiner
- 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.
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**Assessment component to module component 10-M-ORS-1-122: Operations Research**

- 8 ECTS credits, method of grading: (not) successfully completed
- written examination (approx. 90 to 180 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). Module will also be considered successfully completed if the module component was selected as subject of the oral examination covering several modules (separate module component for assessment purposes (Prüfungsteilmodul)) and this examination was passed.
- Language of assessment: English, German if agreed upon with the examiner
- 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.

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<th>Allocation of places</th>
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<th>Additional information</th>
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<p>| Referred to in LPO I  |</p>
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<th>(examination regulations for teaching-degree programmes)</th>
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<td>First state examination for the teaching degree Gymnasium Mathematics (2012)</td>
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