## Module title

**Didactics of Geometry (virtual course)**

### Abbreviation

10-M-VHBDG-152-m01

### Module coordinator

Dean of Studies Mathematik (Mathematics)

### Module offered by

Institute of Mathematics

### ECTS

2

### Method of grading

Only after succ. compl. of module(s)

### (not) successfully completed

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### Duration

1 semester

### Module level

undergraduate

### Other prerequisites

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### Contents

Geometry didactics is about learning and teaching geometry. This course focuses on topics which are central and important for all of geometry and mathematics, namely proving and problem solving. It also addresses topics which are usually discussed only briefly or not at all in university lectures and in the literature. Among these are chapters on space geometry, trigonometry and similarity geometry.

### Intended learning outcomes

The students are acquainted with the subject-specific contents of school geometry, and are able to structure the notions and methods within a conceptual map. They know strategies of short, middle and long term development of understanding of the central concepts of geometry in teaching mathematics. They are able to develop and justify learning units and learning sequences for the important topics in school geometry independently. They are able to assess and value the importance of digital technology with respect to todays and future design of instruction. They know various fields of application of geometric concepts, and are able to perform modelling (in the sense of modelling cycles) independently.

### Courses

**Course type:** eLearning, mostly Virtuelle Hochschule Bayern (vhb)

**Project (web-based, 15 to 20 hours)**

Assessment offered: Once a year, summer semester

### Method of assessment

**Type:** project

**Scope:** 15 to 20 hours

**Language:** if other than German

**Examination offered:** Once a year, summer semester

### Allocation of places

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### Additional information

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### Referred to in LPO I

(Examination regulations for teaching degree programmes)

§ 22 II Nr. 1 h)

§ 22 II Nr. 2 f)

§ 22 II Nr. 3 f)

### Module appears in

First state examination for the teaching degree Grundschule Mathematics (2015)

First state examination for the teaching degree Grundschule Didactics in Mathematics (Primary School) (2015)

First state examination for the teaching degree Realschule Mathematics (2015)

First state examination for the teaching degree Gymnasium Mathematics (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2015)

First state examination for the teaching degree Mittelschule Mathematics (2015)

First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2015)