## Module title

**Algorithms for Geographic Information Systems**

### Abbreviation

10-I=AGIS-152-m01

## Module coordinator

holder of the Chair of Computer Science I

## Module offered by

Institute of Computer Science

## ECTS

5

## Method of grading

numerical grade

## Only after succ. compl. of module(s)

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## Duration

1 semester

## Module level

graduate

## Other prerequisites

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## Contents

Algorithmic foundations of geographic information systems and their application in selected problems of acquisition, processing, analysis and presentation of spatial information. Processes of discrete and continuous optimisation. Applications such as the creation of digital height models, working with GPS trajectories, tasks of spatial planning as well as cartographic generalisation.

## Intended learning outcomes

The students are able to formalise algorithmic problems in the field of geographic information systems as well as to select and improve suitable approaches to solving these problems.

## Courses

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

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## Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 to 120 minutes).

If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).

Language of assessment: German and/or English

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)

§ 22 II Nr. 3b

## Module appears in

First state examination for the teaching degree Gymnasium Computer Science (2015)