### Module title
**Algorithms for Geographic Information Systems**

### Abbreviation
10-I=AGIS-102-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

### Other prerequisites
Where applicable, prerequisites as specified by the lecturer at the beginning of the course (e.g. completion of exercises).

### 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
**V + Ü** (no information on SWS (weekly contact hours) and course language available)

### Method of assessment
written examination (approx. 50 to 60 minutes); if announced by the lecturer by four weeks prior to the examination date, the written examination can be replaced by an oral examination of one candidate each or an oral examination in groups (one candidate each: 15 minutes, groups of 2: 20 minutes, groups of 3: 25 minutes)

Language of assessment: German, English if agreed upon with the examiner

### 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) Computer Science (2010)
- Master’s degree (1 major) Mathematics (2012)
- Master’s degree (1 major) Mathematics (2010)
- Master’s degree (1 major) Computational Mathematics (2012)
- First state examination for the teaching degree Gymnasium Computer Science (2009)