## 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.

## Method of assessment

Written examination (approx. 50 to 60 minutes); if announced by the lecturer 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.

## 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)