

## **Faculty of Architecture**

**Department:** Architecture and Urbanism

**Professional area:** Architecture, Civil Engineering and Geodesy

**Major:** Architecture

**Educational-and-qualification Degree:** Master

### **COURSE DESCRIPTION**

1. **Course unit title:** Geographical Information Systems
2. **Course unit code:** INF 2007
3. **Type of course unit:** elective
4. **Level of course unit:** Master
5. **Year of study:** fourth
6. **Semester when the course unit is delivered:** seventh
7. **Number of ECTS credits allocated:** 3
8. **Name of lecturer:** Assoc. Prof. Alexander Slaev, PhD
9. **Learning outcomes of the course unit:** The basic aim of the course is to acquaint students with the opportunities to apply the geographical information systems and technologies in planning and managing. At the end of their training students will be able to use specialized GIS-software products to solve social, economic and ecological problems in the field of planning.
10. **Mode of delivery:** face-to-face
11. **Prerequisites and co-requisites:** Students have to be familiar with Urban Planning.
12. **Course contents:** Developing a geo-database about separate thematic trends in planning (inventory and assessment of natural resources, of the environment, of the demographic situation and human resources, of the social and technical infrastructure, of natural and anthropogenic risks, etc.); Spatial analysis and modeling of different types of land use; solving practical problems with the help of GIS, connected with the choice of most suitable territories for doing different activities, according to pre-chosen criteria (Land Suitability Analysis); use of GIS when foreseeing economic, social and ecology consequences of the purposeful impact on the territories.
13. **Recommended or required reading:**
  - Попов, А., А. Филипов, Ст. Димитров, ГИС и дистанционни изследвания. Методическо пособие. София, 2005
  - Bernhardsen, T., Geographic Information Systems. New York, John Wiley&Sons Inc., 1999.
  - DeMers, M., Fundamentals of Geographic Information Systems. New York, John Wiley&Sons Inc., 1999.
14. **Planned learning activities and teaching methods:** lectures, seminars
15. **Assessment methods and criteria:** a written work on a particularly set topical theme which is given a grade. That grade is added to the written exam grade thus forming an average final grade.
16. **Language of instruction:** Bulgarian
17. **Work placement(s):** none