

Optional Module

Developing Applications with OSM



Course code	GIS_E_OSMAPPL
Schedule	3 times per year
Duration	3 months
Accreditation	
Closing date for registration	One week before Module start
Credits	6 ECTS
Module Language	English

Course description and Course Objectives

The UNIGIS Module “Developing applications with OSM” corresponds to the recent trend using free geographic information systems (GIS) for imaging, modeling and visualizing purposes. The User-generated knowledge from OpenStreetMap cannot be compared with classic forms of data acquisition and implies an enormous potential for future applications in the field of free geographic information. The module is supposed to provide a latest state of the art overview of the OpenStreetMap project and its technical conception. The module lessons will be divided into three main parts containing a theoretical introduction, a practical handling of OSM data and applications using OSM data to develop web-based maps.

Course Outline

- Defining terms and theoretical background of collaborative geo- projects
- Principles of collaborative mapping in OpenStreetMap
- OSM data model
- Editing applications
- OSM data quality – empirical studies
- Data validation
- Drawing and customizing maps with Osmarender
- OSM raw data management
- OSM data processing (Osmosis)
- Introducing to OpenLayers
- Working with OpenLayers
- OSM Use Cases
- Future Trends

Module meets
www.euromastergi.org
requirements

Elective Modules
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Optional Module

Developing Applications with OSM



AUTHORS/INSTRUCTOR

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Enrico Steiger works together with Dr. Stefan Krampe (CEO) in the austrian company Trafficon.eu developing traffic and planning related solutions including applied research.

Main areas of profession/research:

- Developing applications using volunteered geographic information systems (VGIS)
- Analysing traffic data for Intelligent transportation systems (ITS)
- Implementing and visualizing traffic related projects

Methods

The module is delivered in form of an instructed self-study that is based on explorative learning process and process. Theoretical concepts are complemented with practice oriented examples demonstrated with help of multimedia elements. A discussion forum is used for communication among students and the instructor. Upon completion of the module students are requested to evaluate the module, which is a part of our quality assurance policy and practice.

Reading and Software Requirements

- Bennett, J. (2010): OpenStreetMap. Be your own Cartographer
- (optional in german) Ramm, F.; Topf, J. (2010): OpenStreetMap - Die freie Weltkarte nutzen und mitgestalten. Berlin. 3. Aufl.

Prerequisites

Basic experience in GIS. Passed UNIGIS modules: Introduction in GIS, Data Modeling and Structures, Geodata Acquisition or similar experience

Assessment and Grading

Instructor assessment reflects student's achievements in this module and is conducted through assessing module assignments. This assessment result counts towards the academic qualification. Exercises are to enforce students' knowledge skills whereas and quizzes provide feedback to a student based on availability of correct answers. These should be completed to allow students to assess their own progress and are not included in the module assessment.



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