COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice

Faculty: Faculty of Science

Course ID: ÚGE/ LOS/18	**Course name:** Linux and open source GIS

Course type, scope and the method:
Course type: Practice
Recommended course-load (hours):
Per week: 2 **Per study period:** 28
Course method:

Number of ECTS credits: 3

Recommended semester/trimester of the course: I., II. (Bachelor, Master)

Course level:

Prerequisities:

Conditions for course completion:
The evaluation of the subject is based on active participation in exercises and a combination of mid-term and final control consisting of theoretical and practical tasks. The interim control is carried out during the teaching part of the exercises with a share of 50% in the final assessment. The resulting assessment is the arithmetic average of the assessment from the interim and final inspection. Credits will be awarded to a student who achieves a grade of at least an E in each part of the assessment. For the final evaluation of the subject, the evaluation scheme applies: A (100-90 points), B (80-89 points), C (70-79 points), D (60-69 points), E (50-59 points), FX (0-49 points)

Learning outcomes:
The student will gain knowledge about open source software, its history, availability, license terms of its use and installation. At the same time, he will acquire practical skills in the basic control of the Linux operating system and selected open-source GIS software, especially GRASS GIS and QGIS. The student will be competent to work with geospatial data, perform basic spatial analysis and create map outputs in individual open-source GIS software.

Brief outline of the course:
History of open source software. Licensing policy and its practical consequences. Linux installation options. Linux file system. KDE and GNOME graphical user interfaces. Linux distributions. OSGeoLive installation, system structure. Basic control of Linux in line mode, overview of basic commands. History of GRASS GIS. User and developer community. Control of GRASS GIS. Module system, import/export of data, basic operations with vector and raster data, data visualization, map algebra, interpolations, derivation of basic morphometric parameters, creation of outputs. Working with QGIS, plugins. Advanced raster and vector data operations, data model conversion, geoprocessing tools, map algebra, interpolations, spatial and attribute queries. Getting to know the GIS software included in the OSGeoLive Desktop GIS package – SAGA, gvSIG Desktop, OpenJUMP GIS, uDig.

Recommended literature:

Course language:

Notes:

Course assessment
Total number of assessed students: 64

Course assessment is visible only in case of include the course to some study plan.

Provides: Mgr. Michaela Nováková, prof. Mgr. Jaroslav Hofierka, PhD.

Date of last modification: 30.09.2021

Approved: