

<b>Title:</b>	<b>Geographical information systems</b>
<b>Lecture hours:</b>	30
<b>Study period: (summer/winter)</b>	winter, summer
<b>Number of credits:</b>	6
<b>Assessment methods:</b>	Graded credit
<b>Language of instruction:</b>	English
<b>Prerequisites:</b>	Course for geography and tourism and recreation students
<b>Course content:</b>	<p>1. Basic computer software in Geographic Information Systems Indication and instructions regarding the software (QGIS, SAGA GIS); software configuration; project properties; interface support (QGIS, SAGA GIS, ArcGIS);</p> <p>2. Print composition Preparation of a print / save project to a graphic format; recording formats; support for the print wizard interface (adding a map, editing the legend, adding a map scale scale, scaling objects); placing multiple maps on one sheet (view lock);</p> <p>3. Creating layers Rules for creating vector (point, line and polygon layers) and raster layers; node editing; topology control; object snapping settings (snapping); data recording formats; vector layer attributes;</p> <p>4. Georeferencing / rectification Editing and adding a spatial reference system (CRS); creator of georeferencing in QGIS; offset error check;</p> <p>5. Digital Elevation Model Performing analyzes of DEM derived layers; slope, exposure, hillshading;</p> <p>6. Satellite data Analysis of multispectral satellite data; unsupervised classification, supervised classification; basic indicators and calculations;</p>
<b>Learning outcomes:</b>	<p>K01 - define the basic concepts of the Spatial Information System and the Geographic Information System (GIS), K02 - choose the basic tools of the Geographic Information System programs to create databases on the geographical environment and spatial analysis S01- use digital data and basic GIS programs, S02 - use the basic tools of the Spatial Information System and Geographic Information System programs in spatial analysis, the planning process and space management C01- ability to cooperate with specialists in other fields in the field of spatial analysis and planning of human activities</p>
<b>Name of lecturer:</b>	mgr Sebastian Czapiewski
<b>Email address:</b>	<a href="mailto:sebastian.czapiewski@ukw.edu.pl">sebastian.czapiewski@ukw.edu.pl</a>