

0403472 Geographical Information Systems (GIS)

Design and operation of Geospatial Information Systems (GISs) and their role in digital mapping and spatial data management. Characteristics of GIS: Concepts of information and GIS, the multipurpose cadastre, spatial data management system, georeferencing, land information modeling, spatial representation (vector and raster format), geoprocessing, input/output operations, file storage, data base management systems, and distribution. The selection process of computer hardware/software for GIS, eg. ArcGIS, Geographics, Geomedia etc. Theory of photography. Photographic materials and their physical and sensitometric properties. Photogrammetric optics. Imaging systems; passive and active. Camera calibration. Geometry of aerial photographs, planning, stereoscopy, parallax, simple instruments and planimetric mapping. Theory of orientation.