COURSE DETAIL

GEOGRAPHICAL INFORMATION SYSTEMS (GIS)
Country Denmark
Host Institution University of Copenhagen
Program(s) University of Copenhagen
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Geography Environmental Studies
UCEAP Course Number 157
UCEAP Course Suffix
UCEAP Official Title GEOGRAPHICAL INFORMATION SYSTEMS (GIS)
UCEAP Transcript Title GEO INFO SYSTEMS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description
In this course students learn the basic concepts being used when acquiring, storing, handling, and presenting geographical information – including digital maps. The course introduces the basic analytical capabilities of vector/feature- as well as raster-based GIS. Further, focus is on basic cartography and map-reading. In this way the student obtains the needed theoretic as well as practical skills and competences required to work with maps – both in paper and digital form. The student learns to use the achieved theoretic knowledge when evaluating the quality of available data and produced results. During the course, the students acquire the skills to plan, carry out, and submit a GIS project through the practical exercises. Moreover, the student practices communication with other professionals within the geodata and GIS community. The course covers the following topics: cartography (both in relation to paper and digital maps); map comprehension and appreciation; map types (topographic, thematic, legal, historic, etc.); geodata resources (at the servers of the Institute and on the Internet); digital data types: the vector data model (2D: points, lines and polygons; 3D: point cloud) and the raster data model (images and thematic rasters); data capture (GPS, digitizing and image georectification, LiDAR); geodatabase build-up and editing; assessment of accuracy and quality data transformation (incl. overlay and proximity analyses); recent developments within the field of GIS; internet-based GIS; map layout and digital cartography; GIS in Landscape and Urban Planning; Geodesign.

Language(s) of Instruction
English

Host Institution Course Number
NIGB15035U

Host Institution Course Title
GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

Host Institution Campus
Science

Host Institution Faculty

Host Institution Degree

Host Institution Department
Geoscience and Natural Resource Management

Print