COURSE DETAIL

INTRODUCTION TO GEO-INFORMATION SCIENCE
Country Netherlands
Host Institution Wageningen University and Research Center
Program(s) Wageningen University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Geography
UCEAP Course Number 104
UCEAP Course Suffix
UCEAP Official Title INTRODUCTION TO GEO-INFORMATION SCIENCE
UCEAP Transcript Title GEO-INFO SCIENCE
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description

The course introduces Geo-Information Science and its scientific and societal interests. The starting point of the introduction is the geo-information cycle. This cycle frames geo-data-based actions like acquisition and storage, processing, and visualization. It is explained that these actions can be used to describe, analyze, design, and realize real-world phenomena. Thus geo data is always acquired, processed, and visualized with a specific purpose. This is illustrated via the conceptual, formal, and technical modeling steps. Important in these modeling steps are the roles of geographical data attributes (thematic, geometric, temporal). Because the acquisition and processing of geo data are purposive, metadata plays an important role in finding geo data and geo data processing steps. It is also important to evaluate the (re)usability of geo data and geo data processing steps. Metadata explains important geo data characteristics like (geo)reference, map projection, and available attributes. Geo-visualization, especially cartography concepts, is introduced to show how geo data ought to be communicated. After the introduction of the geo data-related concepts, the course offers geo data processing options. The latter is done by the introduction of three data handling classes (query, transform, and alter) and the data-action model. Basic concepts of Remote Sensing (spectral signature, sensor types, and visual and quantitative processing) are also introduced. The application of all concepts is practiced during a practical and a small project using professional software and data.

Language(s) of Instruction
English

Host Institution Course Number
GRS10306

Host Institution Course Title
INTRODUCTION GEO-INFORMATION SCIENCE

Host Institution Course Details
https://wur.osiris-student.nl/#/onderwijscatalogus/extern/cursus

Host Institution Campus Wageningen University
Host Institution Faculty
Host Institution Degree
Host Institution Department Geo-information Science and Remote Sensing
Course Last Reviewed 2023-2024

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