

Courses in English

Course Description



Department	08 Geoinformatics
Course title	Remote Sensing
Hours per week (SWS)	4
Number of ECTS credits	5
Course objective	Learn about current developments in the context of Remote Sensing, especially: innovative methods and algorithms for digital image processing, information extraction from special remote acquisitions, visualization of remote sensing data, sensor fusion for the optimization of the results, and the temporal and financial effort for the implementation of remote sensing based projects.
Prerequisites	Basics of Remote Sensing and Digital Image Processing, Knowledge on Multispectral Remote Sensing, Classification, GIS, Programming skills, Statistics.
Recommended reading	Chuvieco, E., & Heute, A. (2010): Fundamentals of Satellite Remote Sensing.-CRC Press Liu, J. G. & Mason, P.J. (2016): Essential Image Processing and GIS for Remote Sensing.-Wiley-Blackwell Lillesand, T. M., Kiefer, R.W., Chipman, J. W. (2015): Remote sensing and image interpretation.-6. Edition, Wiley. Further literature on Moodle.
Teaching methods	Discussion, Excursion, Explorative Learning, Seminar, Practice.
Assessment methods	Project thesis (voluntary) & Written Exam
Language of instruction	English
Name of lecturer	Prof. Dr. Andreas Schmitt
Email	andreas.schmitt@hm.edu
Link	https://www.geo.hm.edu/kontakt/prof/prof_dr_andreas_schmitt/index.de.html
Course content	Color space transformations, Image enhancement, Special methods and algorithms for the classification of high-resolution remote sensing data, Object-oriented classification of raster data, special methods for the classification of hyperspectral data, methods of image fusion, Combination of remote sensing with other geodata, Inclusion of remote sensing in geoinformation systems, possibilities and limits of the visualization of remote sensing data, methods and procedures of radar remote sensing, and excursions to research institutions or companies (if applicable).
Remarks	Mandatory subject in the first semester of the master program.