

Course Description for AGEF Network

Name of Module/Course		Applied Geoinformatics and GIS for Renewable Energy (AGGRE)		
Short description		The course introduces to the basics of Geographical Information Systems (GIS) and geospatial analysis for the appraisal of renewable energy sources such as wind, solar, and biomass energy. Participants practically work with vector- and raster-based analysis of discrete and continuous information of resource availability, costs, land suitability and environmental impact. Emphasis will be on the use of open source software (QGIS) and open-access, global geodata.		
Name of Programme		M.Eng. Sustainable Energy & Development, SEDev		
Name of University		Europa-Universität Flensburg		
Name of Lecturer		Prof. Dr. Bernd Möller (TBC)		
Responsible University lecturer		Prof. Dr. Bernd Möller		
Credit Points	SWS	Attendance (h)	Self-study (h)	Total workload (h)
5	4	40	110	150
Start & end dates, WS		timeslot:		
2 weeks in Febuary/March		9:00 – 13:00		
Registration until		Number of possible AGEF participants		
		15		
Content and goals of qualification	- Students will gain knowledge on location-specific aspects of renewable energy planning and evaluation: - The geographic distribution of wind, solar and biomass energy - Access to infrastructure like the electric grid and roads - Rule-based “white-mapping” of potential areas of utilisation - Students will gain practical skills of using geographical information systems for renewable energy assessment and planning: - Spatial and non-spatial queries of geodata - Vector-based analysis like buffer and overlay - Raster-based analysis like distance, surface and suitability - Students can assess suitability of regions and locations for renewable energy projects: - On the basis of a legal planning framework - Using continuous phenomena - In the form of cost-supply analysis for regions - Students are able to source geographical data, carry out simple and more advanced geospatial analysis, and present data and results on maps.			

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Preconditions for participation	Basic understanding of renewable energy technologies and their economics.
Teaching Methods	Brief lectures combined with guided exercises
lesson format (online/face-to-face)	Online
Assessment method	Course portfolio and lab book
Inscription external student	By email to bernd.moeller@uni-flensburg.de