

NEW PROGRAM CONCENTRATION
ENVIRONMENTAL MONITORING & SECURITY MANAGEMENT
STARTING OCTOBER 2011

CARINTHIA
UNIVERSITY
OF APPLIED
SCIENCES

FACHHOCHSCHULE
KÄRNTEN

International Master Degree Program **Spatial Information Management**

SPATIAL INFORMATION MANAGEMENT is a 2 year graduate program at the School of Geoinformation at Carinthia University of Applied Sciences. Spatial Information Management is offering a universal solution framework for many fields of application areas like **Natural Hazards Risk Management, Site Potential Analysis, Infrastructure Planning, Water Resource Management** or **Traffic Simulation and Modeling**. We educate "spatially aware" experts and professionals for the international market. Our graduates provide fast, up-to-date and accurate integration, analysis, simulation and visualization of the relevant spatial situation to stake holders and decision makers.

Our research topics cover "**GIS & Decision Support**", "**Location-Based Systems Solutions**" and "**Innovation & Technology Management**". The program is dedicated to expose students to applied research by solving real world and socially relevant problems with innovative geospatial methods and techniques. Therefore, most of the thesis projects are conducted in **cooperation** with our **partners** in **public administration, academia** and the **private sector** providing **excellent international career opportunities** for our graduates.

Spatial Information Management offers additionally to the core lectures **three exiting and innovative program concentrations**, which have been newly developed and continuously improved in cooperation with international experts like Prof. Dr. Michael Leitner from the Department of Geography & Anthropology at Louisiana State University in Baton Rouge, USA.

ENVIRONMENTAL MONITORING AND SECURITY MANAGEMENT

This new program concentration is positioned in the context of developing strategic concepts and methods for dealing with global change, environmental hazards and security issues. Research and application highlights are **Sensor Web Technologies**, Geodata Acquisition with **Unmanned Aerial Vehicles (UAV)**, **Spatial Statistics**, **Interdisciplinary Risk Assessment**, or **Comparative Crime Analysis**.

GEOINFORMATICS

Geoinformatics deals with innovative geospatial IT-methods and technologies providing better decision support to relevant stake holders. Research and application highlights are **Web-Based Geoinformation Systems**, **GIS Services** and **Location-Based Services**.

SPATIAL TECHNOLOGY MANAGEMENT

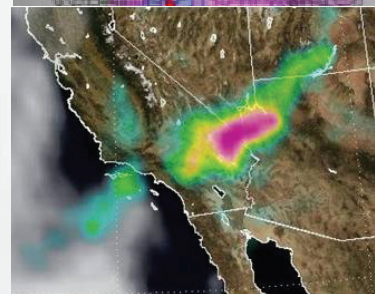
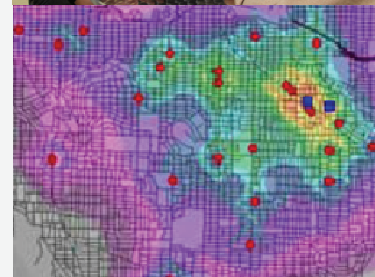
This program concentration focuses mainly on the implementation and management of innovation and technologies in organizations and companies. Highlights are **GI-Related Innovation and Technology Management**, **Site Potential Analysis**, and **Geomarketing**.

Contact:

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CURRICULUM "SPATIAL INFORMATION MANAGEMENT" Master of Science in Engineering	SEMESTER				S W S	ECTS
	1.	2.	3.	4.		
Core Lectures						
Fundamentals in GIS, Mathematics and Computer Science						
Fundamentals in GIS, Mathematics and Computer Science	7				7	10
Geodata Management						
Geodata Integration	1				1	2
Standards and Interoperability	2				2	3
Spatial Decision Support Systems						
Introduction to Spatial Decision Support Systems	5				5	5
Spatial Statistics & Optimization						
Statistical Spatial Analysis	3				3	3
Discrete Combinatorial Optimization	2				2	2
Operations Research						
Selected Aspects of Operations Research	4				4	5
Spatio-Temporal Databases						
Spatial Data Mining		4			4	5
Spatio-Temporal Databases		4			4	5
Scientific Communication						
Technical and Business Communications		2			2	3
Proposal Writing		2			2	2
Entrepreneurship						
Entrepreneurship			3		3	3
International Collaboration and Project Funding			1		1	2
Visualization						
Geovisualization			2		2	3
User Interface Design			2		2	2
Geosimulation						
3D Modeling and Spatio-Temoral Analysis and Modeling			2		2	2
Spatial Simulation Technologies			2		2	3
Project						
Project Management and GIS		2			2	3
Teambuilding and Leadership		2			2	2
Project Development			3		3	3
Project			7		7	7
Program Concentration "Environmental Monitoring & Security Management"						
Advanced GIScience & Technology	5				5	5
Environmental Monitoring		5			5	5
Security Management			4		4	5
Program Concentration "Geoinformatics"						
Advanced GIScience & Technology	5				5	5
Web-GIS		5			5	5
Mobile Computing			4		4	5
Program Concentration "Spatial Technology Management"						
Advanced GIScience & Technology	5				5	5
Site Potential Analysis		5			5	5
Advanced Innovation Management			4		4	5
Master Thesis						
Master Thesis			4		4	30

