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GIS_Landscape Characterization of the Uusimaa Region

Basics of GIS

SUMMARY: This course will explore the potential of GIS in landscape studies and planning by developing the landscape characterization of the Uusimaa region. The objective is to maximize the use of GIS in the definition of landscape units, character areas, regional networks, etc. and to explore existing or new methods for the implementation of the proposed works.

INTRODUCTION: How can landscape be characterized? What for? Which factors should be used for characterization? How much and how can we integrate "objective" and "subjective information"? How can computers help us in processing the increasing amount of available data? Can they create new layers of integrated information? Which algorithms should drive the combination and generation of those new layers? How can landscape, computation and map algebra be interconnected?...

In the course MAR-E1004 Basics of GIS we will try to answer all those questions by working simultaneously in the basics of GIS, in the principles of map algebra (combination of geographic data and spatial layers) and in their application on landscape characterization. The course will combine:

PART1: an introductory part exploring the conceptual and practical potential of geographic and spatial information
 PART2: a research on the existing methods for landscape characterization and for its use in landscape planning and management
 PART3: a Case Study including the landscape characterization of the Uusimaa region, where the students will be invited to use or define their own methodology and to maximize the potential use of Geographic Information Systems (GIS) in the development of their work

- Our motto in this course: There is no better way to learn something than teaching it to a computer...

BASIC COURSE (3 cred., GIS + theory of Landscape Characterization) / FULL COURSE (9 cred, GIS+ theory & practice of Landscape Characterization)