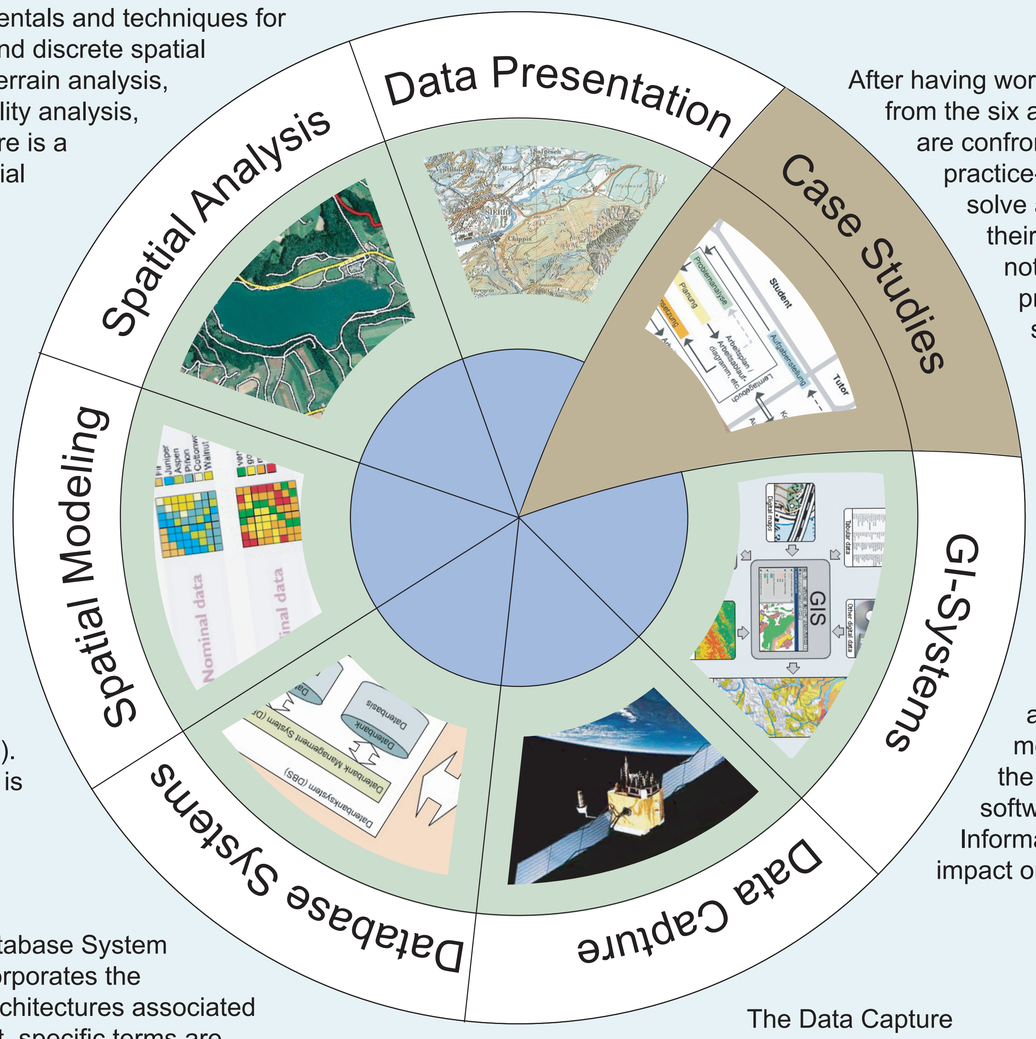
GITTA - Open Content Strategy

Since January 2006 the first GITTA lessons become available under the Creative Commons license. The goal is to establish a „GITTA Community“ that will update and maintain the content of the GITTA lessons. Because GITTA uses an open source XML framework called eLML, no commercial or proprietary software is needed to start implementing or updating lessons and case studies.

Available Content

The Data Presentation module describes the history and use of maps, while introducing the different map types available. Its emphasis is on topographical cartography and the components required for map development, including graphical design with text and color by reference to readability rules. A further focus concentrates on cartographic generalization concepts, procedures, and methods. Within the intermediate lessons, thematic map design as well as mapping with a GIS and cartographic software are discussed.

The main goal of the module is to contribute the technical knowledge required for informed development of GIS applications. Therefore, the key concepts and techniques of spatial analysis are presented at a basic and intermediate level. lessons include fundamentals and techniques for dealing with continuous and discrete spatial variables, spatial queries, terrain analysis, suitability analysis, accessibility analysis, and uncertainty handling. There is a close relationship with the Spatial Modeling module.



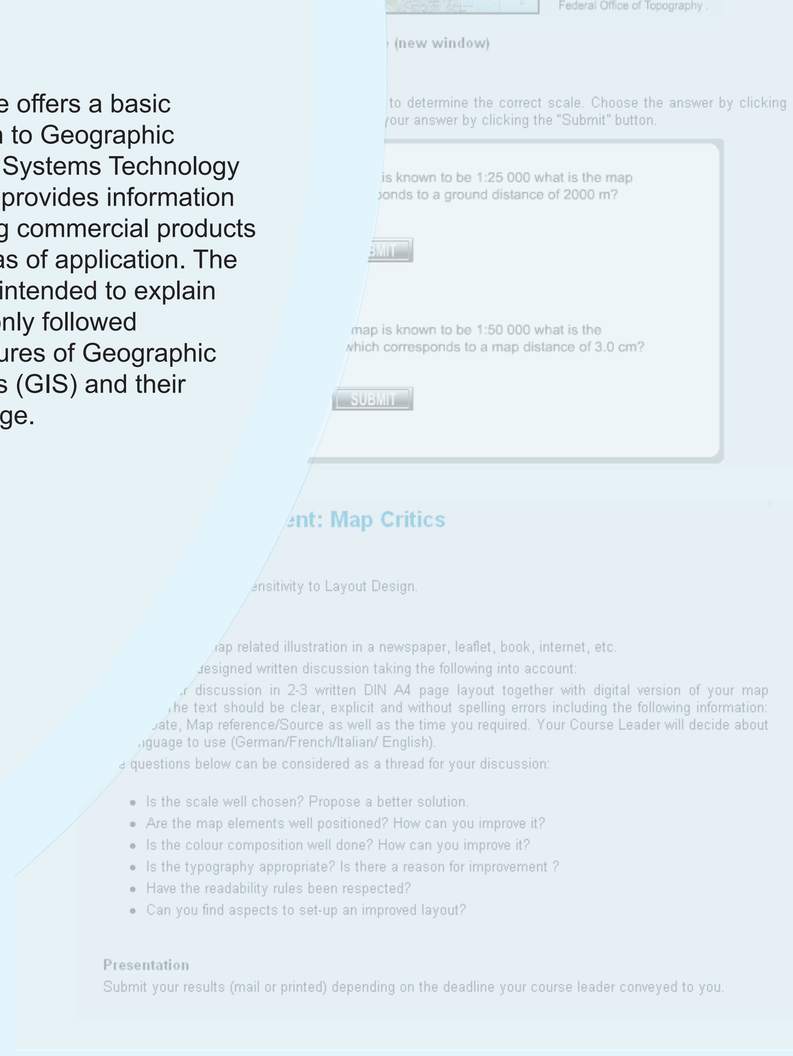
After having worked with different lessons from the six available modules, students are confronted with realistic and practice-relevant GIST cases and must solve a case independently to train their problem-solving skills. Original, not pre-processed, case material is provided and a tutor is helping the students to find solutions for solving the case.

This module presents the main concepts -- projections, location, and topology -- that drive the modeling of the Geographic Space (GS). It gives an overview of GS modeling processes, using regularly and irregularly distributed observation units (raster and object models). The properties of spatial information are then analyzed from the point of view of its measurement scale and origin (measured, derived, or interpreted). Finally, the process of digitization is presented.

The module offers a basic introduction to Geographic Information Systems Technology (GIST), and provides information about existing commercial products and their areas of application. The module is also intended to explain the most commonly followed software architectures of Geographic Information Systems (GIS) and their impact on system usage.

The Database System module incorporates the concepts and architectures associated with databases. First, specific terms are discussed, then the characteristics of such a database approach are compared with other systems. After an overview of database architectures, data models and the Structured Query Language (SQL) are introduced. Exercises and self-tests help to augment the theory.

The Data Capture module introduces students to sources of geographic data and to the broad process of digital capture and data pre-processing. It focuses on selected capture procedures in order to detail strategies and methodologies for the production of relevant geographic information. This module is structured into 4 lessons, with the following content: Overview of sources, Primary sources, Derived sources, and Metadata and quality. Each lesson comprises exercises and a self-test.



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Project Information

Within the Swiss Virtual Campus project GITTA (Geographic Information Technology Training Alliance), 10 partners from 7 Swiss higher education Institutions have created a pool of lessons and case studies that:

- integrate Swiss-wide available GIS knowledge;
- construct a virtual education pool that provides flexibility within different disciplines; and
- provide a hybrid learning environment to substitute ex-cathedra teaching.

GITTA is divided into the 6 modules described above each containing 3 to 7 lessons on two levels (basic and intermediate). These modules are supplemented by case studies, in which the theory is applied so that the students’ problem-solving skills are enhanced.

Partner Institutions:

University of Zurich
ETH Eidgenössische Technische Hochschule Zürich Swiss Federal Institute of Technology Zurich
EPFL École Polytechnique Fédérale de Lausanne
n|w Fachhochschule Nordwestschweiz
HSR Hochschule für Technik Rapperswil
Universitas Friburgensis
Scuola Universitaria Professionale della Svizzera Italiana