

# GISP Test Prep Course

*Course Length: 2 days*

## Overview

The GISCI Geospatial Core Technical Knowledge Exam® is a part of the GIS Professional Certification process. The exam tests knowledge from 44 geospatial knowledge areas (KAs). This course walks through each of the knowledge areas covered by the exam, by reviewing concepts, and providing insights into specific topics that should be mastered to pass the exam.

## Audience

Professionals with at least four years of full-time GIS experience who are planning to apply for GISP Certification and who wish to review the concepts before taking the GISP exam.

## Topics Covered

- GISP Certification Overview – The GISP Certification Process
- GISCI Geospatial Core Technical Knowledge Exam Overview – Basic overview of the exam. (Registering for the exam; How the exam is administered and how the exam is scored.)
- KA1: Geospatial Conceptual Foundations – Review of essential geospatial concepts. (Spatial relationships; Spatial data models; Change detection, managing geographic data uncertainty; Earth geometry, including geoids, ellipsoids, and spheres; Georeferencing systems, including coordinate systems, projections, and horizontal and vertical datums.)
- KA2: Cartography and Visualization – Review of mapping and visualization concepts and best practices (Contour mapping; Basic physical geography; Data collection methods impact on map design; Thematic mapping and other graphic representation techniques; Map design; Classification and symbolization techniques.)
- KA3: GIS Design Aspects and Data Modeling – Review of GIS design. (Data exchange procedures; Data security; Database administration; Systems architecture and design; The enterprise environment; Database schemas and domains; Digital file management; Database design; Database structure; Geospatial data structure; Benefits and shortcomings of the various GIS application formats (i.e. desktop, cloud, server, etc.); GIS hardware and software capabilities; Data models.)
- KA4: GIS Analytical Methods – Review of basic geometric and mathematical principles on which GIS is based. (Overlay analysis; Planar geometry; Algebraic formulas; Basic statistics; Programming concepts; Raster/vector principles; Map scales; Units of measurement.)

- KA5: Data Manipulation – Review of the data types and the considerations involved in data conversation and transfer. (Attribute and spatial queries; Geospatial data types; Field types; Data relationships; Data collection, transfer, and conversion; Data accuracy, resolution, and precision.)
- KA6: Geospatial Data – Review of geospatial data types and basic geomatics. (Metadata standards; Quality control vs. quality assurance; Data archiving and retrieval; Geoprocessing data (join, merge, etc.); Basic geomatics; Basic field data collection procedures and GPS technology.)

## **Format**

In-person lecture and discussions, along with course materials you can keep. Also available as an online course and as a self-study workbook.

## **Prerequisites and Notes**

The GISCI Geospatial Core Technical Knowledge Exam® tests a person’s general geospatial knowledge. It does not test a particular software. Passing the test requires a combination of education and experience that gives a person a solid understanding of many aspects of the geospatial field. Thus, taking this test prep course alone does not guarantee the passage of the exam. However, it does help prepare for the exam by reviewing the 44 Knowledge Areas together and providing a GISP to answer questions and explain specific topics, supplementing the work you will be doing to prepare.

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