

GISP Test Prep Course

Course Length: 2.5 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: Conceptual Foundations – Review of essential geospatial concepts (Understanding of datums, coordinate systems, and projections; Understanding of representation of discrete features and continuous phenomena in GIS; Knowledge of earth geometry and its approximations; Knowledge of basic geomatics and relationships to GIS)
- KA2: Geospatial Data Fundamentals – Review of geospatial data types (Understanding of spatial data models and their associated planar geometries; Understanding of spatial data relationships; Understanding of data quality; Understanding of data resolution; Understanding of data validation and uncertainty; Understanding of metadata; Knowledge of temporal data; Knowledge of spatial data standards, including ISO, FGDC, and OGC)
- KA3: Cartography and Visualization – Review of mapping and visualization concepts and best practices (Understanding of graphic representation techniques and implications; Understanding of map design principles and essential map elements; Understanding of surface interpretation and representation; Understanding of 2D and 3D visualization)
- KA4: Data Acquisition – Sources of GIS data (Understanding of digitization and other manual data collection and conversion methods; Knowledge of field data collection; Knowledge of automated data collection and conversion methods; Knowledge of remotely sensed data sources and collection methods; Knowledge of acquisition, use, and limitations of crowdsourced and open source data and services)

- KA5: Data Manipulation – Review of the data types and the considerations involved in data conversation and transfer (Understanding of georeferencing, data format conversion, and data transformation; Understanding of spatial data generalization operations and methods; Understanding of spatial file types and their applications and limitations; Understanding of data integration)
- KA6: GIS Analytical Methods – Review of basic geometric and mathematical principles on which GIS is based. (Understanding of data selection queries and views; Understanding of techniques and implications of data classification; Understanding of analytical operations and methods; Knowledge of map algebra; Knowledge of descriptive and spatial statistics)
- KA7: Database Design and Management – Review of databases and their relationships (Understanding of relationships among database objects; Understanding of database design; Knowledge of database management and administration; Knowledge of database management and administration; Knowledge of data security)
- KA8: Application Development – Creating GIS models and applications (Knowledge of data transfer protocols; Knowledge of coding, scripting, and modeling basics; Awareness of basic application development methods)
- KA9: Systems Design and Management – Creating new GIS systems and leveraging new technology (Knowledge of systems architecture and design, including various GIS softwares, platforms, and environments; Knowledge of systems and application security; Awareness of trends in geospatial technology)
- KA10: Professional Practice – Expectations in the GIS workplace (Understanding of appropriate interpretation of work-related policies and procedures; Understanding of ethics related to technical GIS work; Knowledge of managing, documenting, and communicating GIS work; Awareness of how GIS is used across other professions; Awareness of GIS-related professional organizations and certification)

Format

In-person or webinar lecture and discussions, along with course materials you can keep.

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. Disclaimer: The GIS Certification Institute (GISCI) and TeachMeGIS are not affiliated.