

GISCI Geospatial Core Technical Exam[®] Knowledge Categories

2026 Blueprint Revision - First Exam Usage: June 2027

| Knowledge Categories | | Weight |
|---|-------|--------|
| 1. Conceptual Foundations | | 11% |
| 2. Geospatial Data Fundamentals | | 14% |
| 3. Cartography and Visualization | | 11% |
| 4. Data Acquisition | | 10% |
| 5. Data Manipulation | | 12% |
| 6. Analytical Methods | | 12% |
| 7. Database and Systems Design/Management - <i>Edit from 2019 Exam Blueprint</i> | | 7% |
| 8. Application Development | | 7% |
| 9. Applied Geospatial Technologies - <i>New exam content area for 2026 Exam Blueprint</i> | | 8% |
| 10. Professional Practice | | 8% |
| | Total | 100% |

Knowledge, Skills & Ability Areas

| 1. Conceptual Foundations | | 11% |
|----------------------------------|--|-----|
| 101 | Understanding of datums, coordinate systems, and projections | |
| 102 | Understanding of representation of discrete features and continuous phenomena in GIS | |
| 103 | Knowledge of earth geometry and its approximations | |
| 104 | Knowledge of basic geomatics and relationships to GIS | |
| 2. Geospatial Data Fundamentals | | 14% |
| 201 | Understanding of spatial data models and their associated planar geometries | |
| 202 | Understanding of spatial data relationships | |
| 203 | Understanding of data quality | |
| 204 | Understanding of data resolution | |
| 205 | Understanding of data validation and uncertainty | |
| 206 | Understanding of metadata | |
| 207 | Knowledge of temporal data | |
| 208 | Knowledge of spatial data standards, including ISO, FGDC, and OGC | |
| 3. Cartography and Visualization | | 11% |
| 301 | Understanding of graphic representation techniques and implications | |
| 302 | Understanding of map design principles and essential map elements | |
| 303 | Understanding of surface interpretation and representation | |
| 304 | Understanding of 2D and 3D visualization | |

| 4. Data Acquisition | | 10% |
|---|---|------------|
| 401 | Understanding of digitization and other manual data collection and conversion methods | |
| 402 | Knowledge of field data collection | |
| 403 | Knowledge of automated data collection and conversion methods | |
| 404 | Knowledge of remotely sensed data sources and collection methods | |
| 405 | Knowledge of acquisition, use, and limitations of crowd-sourced and open-source data and services | |
| 5. Data Manipulation | | 12% |
| 501 | Understanding of georeferencing, data format conversion, and data transformation | |
| 502 | Understanding of spatial data generalization operations and methods | |
| 503 | Understanding of spatial file types and their applications and limitations | |
| 504 | Understanding of data integration | |
| 505 | Awareness of real-time data design, ingestion, processing, configuration, and integration in GIS - <i>New KSA</i> | |
| 6. Analytical Methods | | 12% |
| 601 | Understanding of data selection queries and views | |
| 602 | Understanding of techniques and implications of data classification | |
| 603 | Understanding of analytical operations and methods | |
| 604 | Knowledge of map algebra | |
| 605 | Knowledge of descriptive and spatial statistics | |
| 7. Database and Systems Design/Management - <i>Edit from 2019 Exam Blueprint</i> | | 7% |
| 701 | Understanding of relationships among database objects | |
| 702 | Understanding of database design | |
| 703 | Knowledge of database management and administration | |
| 704 | Knowledge of data security | |
| 705 | Knowledge of systems architecture and design, including various GIS software, platforms, and environments | |
| 706 | Knowledge of systems and application security | |
| 8. Application Development | | 7% |
| 801 | Knowledge of data transfer protocols | |
| 802 | Knowledge of coding, scripting, and modeling basics | |
| 803 | Awareness of basic application development methods | |
| 804 | Awareness of the design, use, and management of application programming interfaces (APIs) for use in GIS - <i>New KSA</i> | |

| 9. Applied Geospatial Technologies - <i>New exam content area for 2026 Exam Blueprint</i> | | 8% |
|--|---|-----------|
| 901 | Knowledge of utilizing appropriate cloud service models and their configurations for geospatial data consumption and analysis | |
| 902 | Knowledge of cloud GIS architectures, geospatial data management, maintenance, publishing, and troubleshooting | |
| 903 | Awareness of cloud GIS integration with enterprise applications, APIs, data collection, and automated workflows | |
| 904 | Awareness of large language models (LLMs), appropriate machine learning/GeoAI methods, model training and validation, and integration of outputs into GIS systems | |
| 905 | Awareness of responsible AI principles such as limitations, data governance, bias mitigation, privacy and security, and ethical use of AI in GIS | |
| 906 | Awareness of design, implementation, management, and scalable analyses for large-scale datasets and AI/ML outputs in GIS | |
| 10. Professional Practice | | 8% |
| 1001 | Understanding of appropriate interpretation of work-related policies and procedures | |
| 1002 | Understanding of ethics related to technical GIS work | |
| 1003 | Knowledge of managing, documenting, and communicating GIS work | |
| 1004 | Awareness of how GIS is used across other professions | |
| 1005 | Awareness of GIS-related professional organizations and certification | |

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