

SOUTHEAST COMMUNITY COLLEGE
ADVANCED TECHNOLOGY AND SKILLED TRADES DIVISION
Geographic Information Systems Technician Program
Revision Date: November, 2025

I. CATALOG DESCRIPTION

Course Number: GIST 2120
Course Title: Geodatabase Design and Management
Prerequisite: GIST 1110 Min grade C
Catalog Description: This course introduces the design, development, and management of geospatial databases, including multi-user enterprise geodatabases. In addition to learning about relational database design, students will construct and maintain spatial databases.
Credit Hours: 3
Class Hours: 45
Lab Hours: 0
Total Contact Hours: 45

II. COURSE OBJECTIVES: *Course will:*

- A. Introduce students to geodatabases.
- B. Provide students with the ability to design a geodatabase.
- C. Provide students with the ability to implement the design and to build a geodatabase.
- D. Provide students with the ability to use the power of a geodatabase.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Describe functionality, applications and limitations associated with common GIS and CAD formats that can be stored in a geodatabase.
 - 2. Explain central concepts in GIS database management.
 - 3. Create properly designed geodatabases.
 - 4. Implement and apply relations, rules and domains using a geodatabase.
- B. General Education Learning Outcomes (GELOs)
 - 1. GELO 3: Critical Thinking & Problem Solving
Outcome 1: Collect, identify, interpret and analyze data

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Geodatabase overview
- B. Geodatabase architecture
- C. Design of a geodatabase
- D. Building a geodatabase
- E. Data management

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s): TBD
- B. Other Resources: Internet and computer access (Not a tablet or phone)

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 - 1. Module overviews
 - 2. Video presentations
 - 3. Readings and resources

VII. METHODS OF EVALUATION

- A.** Methods of evaluation typically include a combination of the following:
 - 1.** Assignments
 - 2.** Discussions
 - 3.** Projects
 - 4.** Quizzes/Exams