SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Geographic Information Systems Technician Program
Revision Date: August 21, 2023

I. CATALOG DESCRIPTION

Course Number:	GIST1110
Course Title:	Introduction to Geospatial Technology
Prerequisite(s):	None
Catalog Description:	Students will learn how to think spatially, become familiar with information technology, produce maps, communicate effectively using spatial information, and conduct data analysis with GIS.
Credit Hours:	3
Class Hours:	45
Lab Hours:	0
Total Contact Hours:	45

II. COURSE OBJECTIVES: *Course will:*

A. Introduce students to geospatial technologies and global positioning systems (GPS)
B. Examine the basic functions of geospatial software and hardware.
C. Utilize GIS software to compile, analyze and present geospatial data.
D. Introduce students to map projections and coordinate systems used in GIS.
E. Present terminology used in the GIS industry.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. Student Learning Outcomes**:** *Student will be able to:*
- **1.** Describe the fundamental concepts of geospatial technologies and global positioning systems.
- **2.** Demonstrate proficiency in the basic functions of geospatial software.
- **3.** Design and create cartographic products by applying cartographic principles.
- **4.** Identify and understand vector and raster data and demonstrate appropriate use of each of these data structures.
- **5.** Demonstrate basic proficiency in map creation and design principles, including thematic map display, employment of map projections and cartographic design.
- **6.** Apply the fundamentals of GIS to compile, create, edit, analyze and present geospatial data using ArcGIS software.

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 (CID may provide more detailed information)

A. Introduction to GIS/GPS concepts
B. Introduction to GIS software
C. Interacting with maps and data
D. Exploring online resources
E. Working with coordinate systems and projections
F. Symbolizing features
G. Classifying features
H. Labeling features
I. Making maps for presentation

J. Building geodatabases
K. Creating and editing features
L. Geocoding
M. Querying data
N. Selecting features by location

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): Esri Press, Law, Michael and Collins, Amy, *Getting to know ArcGIS for Desktop,* (Refer to CID and/or instructor for current edition)
B. Other Sources: Internet and computer access.

VI. METHODS OF PRESENTATION/INSTRUCTION

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

VII. METHODS OF EVALUATION

A. Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
1. Assignments
2. Discussions
3. Projects
4. Quizzes/Exams