SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Geographic Information Systems Technician Program
Revision Date: August 22, 2022
Syllabus Statements

I. CATALOG DESCRIPTION

Course Number:	GIST 1160
Course Title:	Techniques in Cartography
Prerequisite:	None
Catalog Description:	This course introduces the principles and practices of digital map making and cartographic representation. Content will emphasize basic principles of map design and creation and will employ techniques associated with geographic information system (GIS) data analysis and output phases. Topics will include map design principles, symbolization, data classification, map scale and generalization, typography, and color theory.
Credit Hours:	3
Class Hours:	45
Lab Hours:	0
Total Contact Hours:	45

II. COURSE OBJECTIVES: *Course will:*

A. Introduce students to cartographic principles and techniques.
B. Apply appropriate fonts and colors to a map.
C. Utilize GIS software to apply appropriate techniques to represent data on a map.
D. Layout data and map elements.
E. Present appealing maps that draw the attention of the viewer.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A. Student Learning Outcomes: *Student will be able to*:
- **1.** Categorize and describe different types of maps (thematic, reference…) and be able to give examples of how they are used.
- **2.** Describe the components of a map (map elements).
- **3.** Employ an appropriate geographic referencing system (datum, projection, coordinate system) for a given purpose.
- **4.** Select and apply ethical and appropriate data model, map scale, map elements, symbolization and color to produce maps that effectively communicate quantitative and qualitative geographic data.
- **5.** Design professional quality maps, including map elements such as text, graphs, charts and diagrams, employing cartographic principles.
- **6.** Produce maps and related products in a variety of formats (hardcopy, digital and web).
- **7.** Critique maps for appropriate use of cartographic design principles.

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. Introduction to cartographic design
B. Data Standardization and classification
C. Organizing page structure
D. Typographic principles
E. Color and symbology

F. Understanding and choosing projections
G. Introduction to map elements and map types

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): Rock, Amy, and Malhoski, Ryan, *Mapping with ArcGIS Pro*, (Refer to CID and/or instructor for current edition)
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