

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

I. CATALOG DESCRIPTION

Course Number: GIST 2180
Course Title: Geospatial Web Applications
Prerequisite: GIST 1110 Min grade C
Catalog Description: The course involves the design, creation, configuration, optimization of geospatial servers and applications to deliver content across the Internet. Students will be introduced to the design, optimization of geospatial servers, and maintenance of basic geospatial web services and applications. The course includes an introduction to browser and mobile enabled interactive applications.
Credit Hours: 3
Class Hours: 45
Lab Hours: 0
Total Contact Hours: 45

II. COURSE OBJECTIVES: *Course will:*

- A. Introduce students to GIS web applications.
- B. Provide students with a comprehensive and up-to-date overview of Web GIS.
- C. Inspire students with the broad and real-world applications of Web GIS.
- D. Provide students with the state-of-art technical skills to build Web GIS applications.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Build basic web-based geospatial applications.
 - 2. Perform customization of web-based geospatial applications.
 - 3. Create and/or modify a basic interactive Web-based geospatial user interface.
 - 4. Publish geospatial resources to a web service.
- 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. Basics of web-based geospatial technologies
- B. Publish data resources to the web
- C. Customize GIS web applications
- D. Hosted feature layers
- E. Basics of Web AppBuilder
- F. Web application development

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s): Fu, Pinde, Getting to Know Web GIS, 5th ed., Esri Press, 2022, ISBN: 978-1589487277
- 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