

## **GIST-230 GEOGRAPHIC IMAGE ANALYSIS      4 CREDITS**

### **SYLLABUS**

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#### **CATALOG DESCRIPTION**

This course will cover the foundation of remote sensing, aerial photo interpretation, the use of imagery in GIS, and 3D visualization through lecture and lab. Students will engage in specific applications such as image classification and multi-spectral analysis to solve real world urban and environmental problems. Applications may include analyses of land use/land cover, planning, transportation, public safety, vegetation, biodiversity, ecology, water resources, and geology.

Prerequisites: None

Semester Offered: Fall & Spring

#### ***COMMON STUDENT LEARNING OUTCOMES***

*Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...*

##### **BROAD AND SPECIALIZED LEARNING**

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

##### **CRITICAL THINKING**

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

##### **CULTURAL AND CIVIC ENGAGEMENT**

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

##### **EFFECTIVE COMMUNICATION**

Students will exchange ideas and information with clarity in multiple contexts.

##### **INFORMATION LITERACY**

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

##### **INTEGRATING TECHNOLOGIES**

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

#### **COURSE LEARNING OUTCOMES**

*Upon successful completion of the course, the student will be able to...*

1. Gain a basic understanding of the theory and application of remote sensing and image processing techniques to a variety of fields.

2. Develop knowledge and skills in aerial photography interpretation.
3. Learn to use digital satellite and aerial imagery in a GIS.
4. Develop knowledge and skills in 3D geographic visualization.