

GEOSPATIAL TECHNOLOGY & DATA SCIENCE (GIST)

GIST 11 • INTRODUCTION TO MAPPING & SPATIAL REASONING

Units: 4
Hours: 4 lecture per week (48 total per quarter)
Advisory: This is an introductory level course in the applications of GIST, and assumes no prior knowledge of the discipline; Elementary Algebra or equivalent recommended; not open to students with credit in GEOG 11.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Area V: Communication & Analytical Thinking
Transferable: CSU/UC
Grade Type: Letter Grade (Request for Pass/No Pass)
Repeatability: Not Repeatable
Cross-Listed: GEOG 11

Introduction to the fundamental concepts of geospatial technology, including Geographic Information Systems (GIS), Remote Sensing (RS) and Global Positioning Systems (GPS), map reading, and cartography. Exploration of how geospatial technologies are used in addressing human and environmental issues and can promote sustainability.

GIST 12 • INTRODUCTION TO GEOSPATIAL TECHNOLOGY

Units: 4
Hours: 3 lecture, 3 laboratory per week (72 total per quarter)
Advisory: This is an introductory level course in the applications of GIST, and assumes no prior knowledge of the discipline; concurrent or prior enrollment in GEOG 11 or GIST 11 recommended; not open to students with credit in GEOG 12.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: CSU/UC
Grade Type: Letter Grade (Request for Pass/No Pass)
Repeatability: Not Repeatable
Cross-Listed: GEOG 12

Study of geospatial technology, including Geographic Information Systems (GIS), Global Positioning Systems (GPS), cartography, remote sensing, and spatial analysis. Application of Geographic Information Systems (GIS) science to spatial data management. Assessment of vector and raster systems, scale, resolution, map projection, coordinate systems and georeferencing. Identification and acquisition of spatial data.

GIST 52 • GEOSPATIAL DATA ACQUISITION & MANAGEMENT

Units: 4
Hours: 3 lecture, 3 laboratory per week (72 total per quarter)
Advisory: This is an intermediate level course in GIS, and assumes solid understanding of GIST and the ability to use industry standard software; successful completion of GEOG 11 or GIST 11 and GEOG 12 or GIST 12 strongly recommended; not open to students with credit in GEOG 52.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: CSU
Grade Type: Letter Grade (Request for Pass/No Pass)
Repeatability: Not Repeatable

Study of Geographic Information Systems (GIS) science and its applications to spatial data management. Data acquisition using GPS, digitizing and scanning techniques. Data management. Editing and verifying. Raster data manipulation and importing. Database management. Advanced queries and database manipulation.

GIST 53 • ADVANCED GEOSPATIAL TECHNOLOGY & SPATIAL ANALYSIS

Units: 4
Hours: 2 lecture, 6 laboratory per week (96 total per quarter)
Advisory: This is an advanced level course in GIS, and assumes in-depth understanding of GIST and data structures and fluency using industry standard software; successful completion of the following courses strongly recommended: GEOG 11 or GIST 11, and GEOG 12 or GIST 12, and GIST 52.

Degree and Credit Status: Degree-Applicable Credit Course

Foothill GE: Non-GE
Transferable: CSU
Grade Type: Letter Grade (Request for Pass/No Pass)
Repeatability: Not Repeatable

Introduction to problem-solving and decision-making using geospatial analysis techniques, applicable to a range of disciplines.

GIST 54A • SEMINAR IN SPECIALIZED APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS I

Units: 2
Hours: 2 lecture per week (24 total per quarter)
Advisory: This is an introductory level course in the applications of GIST, and assumes no prior knowledge of the discipline; not open to students with credit in GEOG 54A.

Degree and Credit Degree-Applicable Credit Course

Status:

Foothill GE: Non-GE

Transferable: CSU

Grade Type: Letter Grade (Request for Pass/No Pass)

Repeatability: Not Repeatable

Seminar on the diverse applications of Geographic Information Systems (GIS). Weekly presentations by guest speakers.

GIST 58 • REMOTE SENSING & DIGITAL IMAGE PROCESSING

Units: 3
Hours: 2 lecture, 3 laboratory per week (60 total per quarter)
Advisory: This is an intermediate level course in GIST, and assumes the ability to use industry standard software; successful completion of GEOG 11 or GIST 11, and GEOG 12 or GIST 12 strongly recommended; not open to students with credit in GEOG 58.

Degree and Credit Degree-Applicable Credit Course

Status:

Foothill GE: Non-GE

Transferable: CSU

Grade Type: Letter Grade (Request for Pass/No Pass)

Repeatability: Not Repeatable

Physical basis of remote sensing. Aerial photography and high resolution multi-band imaging. Satellite multi-band optical remote sensing. Other forms of remote sensing (RADAR, SAR, LIDAR). Applications of remote sensing.