

GEOGRAPHIC INFO SCIENCE (GISC)

GISC 216 Geotech in a Global Community 3 Hours

Introduces the purpose, operation and application of Geographic Information Science technologies in contemporary society. This course cannot be substituted for any other GIS course. **Colonnade/Statewide General Education Code K-LG | SB**

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Recent Term(s) Offered: fall 2022; fall 2023

GISC 316 Geographic Information Systems I 4 Hours

Geographic Information Science I Introduces spatial thinking with a cross-disciplinary foundation in dealing with spatial/geographical data; their manipulation, analysis, interpretation and use in problem solving. Includes data creation, digitizing, database organization, queries and geoprocessing.

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GISC 317 Geographic Information Systems II 4 Hours

Geographic Information Systems II will further explore the principles, concepts, and applications of GIS. Through case studies, guest speakers, focused autonomous research investigations, students will apply this geospatial technology to solving real-world issues.

Prerequisite(s): GISC 316 with a minimum grade of C

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GISC 414 Remote Sensing Fundamentals 3 Hours

Fundamentals of remote sensing theory and application including the electromagnetic spectrum, history of remote sensing, sensing platforms, system limitations, and applications for vegetation studies, land-use change, and environmental management. Course includes a lab component. Note: Permission of instructor may be required.

Prerequisite(s): GISC 317

Recent Term(s) Offered: spring 2022; summer 2023; fall 2024

GISC 417 GIS Analysis & Modeling 3 Hours

Develops expertise with a broad range of spatial analysis and modeling functions using GIS. A problem-oriented approach. Note: Permission of instructor may be required.

Prerequisite(s): GISC 317 with a minimum grade of C

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GISC 418 Web Applications in GIS 3 Hours

Understanding and utilizing different techniques for creating, analyzing, and disseminating GIS data and services via the Internet. Note:

Permission of instructor may be required.

Prerequisite(s): GISC 317 with a minimum grade of C

Recent Term(s) Offered: fall 2023; spring 2024

GISC 419 GIS Programming 3 Hours

Learning the process of expanding GIS functionalities. Customizing a GIS system via computer programming. Note: Permission of instructor may be required.

Prerequisite(s): GISC 317 with a minimum grade of C

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GISC 423 GIS and Location Analytics 3 Hours

Explores selected issues related to location analytics of GIS. Students will develop applied skills and knowledge in transportation, urban management, locational analysis and business geography.

Prerequisite(s): GISC 317 with a minimum grade of C

Recent Term(s) Offered: fall 2022; spring 2023

GISC 443 GIS Databases 3 Hours

The concepts and principles of GIS database planning, design, implementation, and administration. Focuses on the development of state-of-the-art GIS databases. Note: Permission of instructor may be required.

Prerequisite(s): CS 170 with a minimum grade of C and GISC 317 with a minimum grade of C

Recent Term(s) Offered: fall 2023; spring 2024

GISC 477 Special Topics in GIS 3 Hours (repeatable max of 6 hrs)

Applications of GIS technologies in selected technical areas such as 3D GIS and Enterprise GIS or directed research of a selected domain-specific problem. Repeatable once for credit. Note: Permission of instructor may be required.

Prerequisite(s): GISC 317 with a minimum grade of C

Recent Term(s) Offered: spring 2022