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