GEOGRAPHY: INFORMATION SCIENCE (GIS)

GIS1000 MAPPING FUNDAMENTALS SYSTEMS II (3.00 Credits)
Mapping Fundamentals introduces students to the design, compilation, and construction of thematic maps. Topics include map projections, page layout, scale change and generalization, lettering, symbols, color usage and reproduction. The major types of thematic mapping (proportional symbols, isopleths, and choropleths) are studied. Exercises utilizing graphics software (Adobe Illustrator 7.0) are designed to introduce students to computer assisted cartography. Lab assignments provide an opportunity to apply cartographic theory in a wide range of mapping exercises.
Total Contact Hrs: 48.00
Lecture Hrs: 48.00

GIS1030 REMOTE SENSING AND APPLICATIONS (3.00 Credits)
This course introduces basic concepts and fundamentals of remote sensing, image processing, and the Global Positioning System (GPS). The principles and processes involved in airphoto interpretation will be reviewed and examined. Image processing techniques will be reviewed from practical and mathematical points of view. The course is intended to provide the student with the background information necessary to successfully use remotely sensed imagery and GPS in conjunction with GIS technology. Prerequisite: Knowledge of Windows operating system.
Total Contact Hrs: 48.00
Lecture Hrs: 48.00

GIS1040C INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS I (3.00 Credits)
The intent of this course is to provide the student with a detailed introduction in Geographic Information Systems (GIS) and support this information with laboratory activities. The course will cover all working knowledge of the theory aspects of geographic information systems including data collection, preprocessing, data management and data analysis as well as an introduction to the application of these systems. Prerequisite: knowledge of Windows operating system.
Total Contact Hrs: 48.00
Lecture Hrs: 32.00
Lab Hrs: 16.00
Fees: LABORATORY FEE $13.00

GIS1042C INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS II (3.00 Credits)
This course will build upon the student's fundamental knowledge of GIS gained in the prerequisite course titled Introduction to Geographic Information Systems I. The student will learn how to implement geographic concepts in GIS systems. The course will provide the student with the fundamental of computing and information science systems and cartography. It will introduce the student to the theory and practice of computer-aided cartography. In addition, the student will delve more deeply into data representation, manipulation and presentation.
Total Contact Hrs: 64.00
Lecture Hrs: 32.00
Lab Hrs: 32.00
Fees: LABORATORY FEE $13.00
Complete all the courses in the following option:
- Prerequisite: GIS1040C

GIS1047C APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS (3.00 Credits)
A combined lecture and laboratory course in which students will draw upon the principles learned in GIS I and GIS II to increase/refine skills and apply them to individual and/or group projects.
Total Contact Hrs: 64.00
Lecture Hrs: 32.00
Lab Hrs: 32.00
Fees: LABORATORY FEE $13.00
Complete all the courses in the following option:
- Option 1 - Prerequisite: GIS1040C and GIS1042C

GIS4301C ADVANCED GEOGRAPHIC INFORMATION SYSTEMS (3.00 Credits)
This is an advanced project-based course where the student will apply fundamental and intermediate concepts in geographic information systems (GIS) to a specific project utilizing GIS technology and industry standard software. Students should come prepared with a project topic, scope, goals and objectives, and data sources. An oral presentation of the project will be made at the completion of the course.
Total Contact Hrs: 32.00
Lecture Hrs: 32.00