

ENVIRONMENTAL SCIENCE (ES)

ES 441 Principles and Applications of Geographical Information Systems (GIS) (3 Credits)

Lecture: 2, **Lab:** 1

Introduction to theoretical, technical and applied aspects of GIS. Principles and Applications of Geographical Information Systems (GIS) is an introductory course to the concepts and use of geospatial (GIS and GPS) technology. It involves introducing the hardware and software component of the GIS and review of GIS applications for the fields of environmental and biological studies.

College/School: Col of Science, Engr & Tech

Department: Dept Environmental Toxio

ES 442 Geospatial Ecology (3 Credits)

Lecture: 2, **Lab:** 1

Monitoring and Managing the ecological and environmental responses. The geospatial ecology course enforces an understanding on the influence of urbanization and global changes on the environmental, plant and animal population and communities. Explore the applications of GIS, and Remote Sensing as a tool to monitor and manage ecological and environmental resources.

College/School: Col of Science, Engr & Tech

Department: Dept Environmental Toxio

ES 443 Remote Sensing and Image Interpretation (3 Credits)

Lecture: 2, **Lab:** 1

Application of remote sensing for environmental monitoring. Introduction to remote sensing and image processing is designed to introduce and explore the basic applications of remotely sensed data in the evaluation of environmental problems. The course includes the theories and principles of remote sensing, types of sensors, identification and mapping the materials.

College/School: Col of Science, Engr & Tech

Department: Dept Environmental Toxio

ES 445 Geospatial Modeling (3 Credits)

Lecture: 2, **Lab:** 1

Geospatial Modeling for environmental, ecological issues. The geospatial analytical and simulation models helps to identify and better understand the knowledge and data gaps in the fields of environmental and ecological sciences, to develop better monitoring and management strategies and to make simulation and predictions of the patterns and processes into the future.

College/School: Col of Science, Engr & Tech

Department: Dept Environmental Toxio