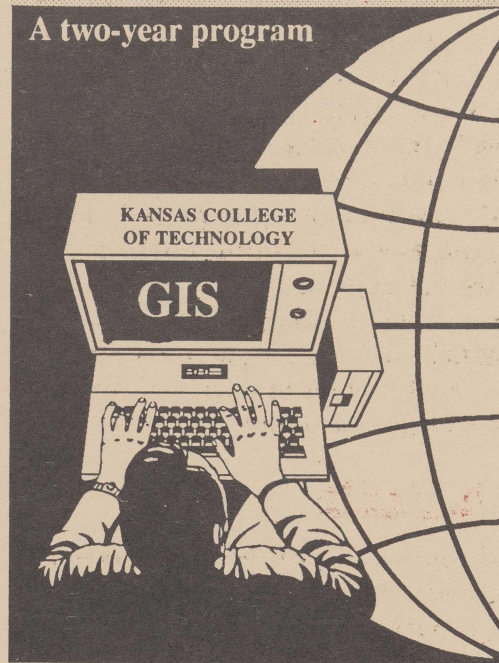


Civil Engineering Technology
Kansas College of Technology
2409 Scanlan Avenue
Salina, Kansas 67401-8196

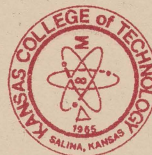
GEOGRAPHIC INFORMATION SYSTEMS (GIS) OPTION

A two-year program



KANSAS COLLEGE OF TECHNOLOGY

Salina, Kansas



CIVIL ENGINEERING TECHNOLOGY DEPARTMENT

NEED MORE INFORMATION?

Kansas College of Technology is a two-year, Kansas Board of Regents institution with a mission of supplying applicable technical skills for the State of Kansas.

If you need more information about either the Geographic Information Systems Option, or degree programs in Civil Engineering Technology or Surveying Technology contact:

Bill Powell, Steve Thompson, or
Dennis Shreves by phone at (913) 825-0275.
Or write to:

Kansas College of Technology
Civil Engineering Technology Department
2409 Scanlan Avenue,
Salina, Kansas 67401-8196.

THE GIS PROGRAM

The Geographic Information Systems (GIS) Technology Program Option is being developed to address a rapidly increasing need for technicians in the field of GIS. The Kansas College of Technology GIS Option is designed to produce Civil Engineering Technology and Surveying Technology graduates that can enter the GIS workplace and function immediately at the operational level. Ultimately, the College has a goal to establish an Associate degree program in GIS which would be the first associate degree GIS program in the United States. KCT is already offering an introductory course in GIS, and a GIS projects course using recently purchased GIS hardware and software.

WHAT IS A GIS?

A GIS is a computer-based mapping system which combines computer graphics (mapping) and an efficient informational database. The GIS stores, integrates, and analyzes information about land aspects—what is on it (and under it), who owns it, what is it worth, where the natural resources, utilities, and environmentally sensitive areas are located relative to each other and to other land aspects.

WHERE IS GIS USED?

GIS technology is currently being used in a wide variety of applications: tax mapping, resource management, managing and optimizing routing of emergency vehicles, delivery vans and trucks, facilities management, planning, management of transportation systems and utility networks.

GIS EQUIPMENT

The major items to be purchased will be the computer hardware and software to complete 5 student workstations in GIS, a 3-receiver GPS surveying system, and a total station surveying instrument. A Global Position Satellite (GPS) surveying system is a system for the location of precise points on the earth through the use of 21 military navigational satellites orbiting the earth. A total station surveying instrument is a device used for the electronic observation and recording of angles, distances, and identification of points which can then be downloaded to a computer for analysis and plotting. A total station automates the previous surveying process of reading angles and measuring distances manually and physically writing them into a field book and then going back to the office and manually plotting the points on a drawing. The proposed equipment is state-of-the-art, high-tech instrumentation!

GIS OUTLOOK

The GIS option will provide graduates to meet the statewide need for technicians in state, county, and local government positions, as well as the private sector. A GIS Advisory Board comprised of representatives from a number of state agencies has been appointed to advise the Governor of Kansas on priorities and funding of GIS for the state (a KCT faculty member is on the Technical Advisory Committee to the GIS Board). During the recent statewide reappraisal a number of Kansas counties used GIS systems to accomplish the required tax mapping and build the related tax information database. Expectations are that well qualified students from Kansas and surrounding states will be attracted to the program.

GIS CURRICULUM

The GIS Option in Civil Engineering Technology is a four semester, 68 semester credit hour program consisting of courses in:

GEOGRAPHIC INFORMATION SYSTEMS

Introduction to GIS
Technical Issues in GIS
Operating a GIS
GIS Practicum or an Optional
Work/Study Internship
Georeferencing

MATHEMATICS AND PHYSICAL SCIENCE

College Algebra
Plane Trigonometry
Statistics
Geology
Physics I

COMMUNICATION/HUMANITIES

English Composition I
Public Speaking
Technical Writing
(Elective)

CIVIL/SURVEYING

Plane Surveying
Civil Technology Drafting
Photogrammetry
Introduction to CAD

GEOGRAPHY

Physical Geography

COMPUTER SCIENCE

FORTRAN
Computer Graphics
Design, Systems, and Software
Data Communications and Networking

ANCILLARY

Technical Drafting