

ENVIRONMENTAL ENGINEERING TECHNOLOGY: LAND SURVEYING & GEOGRAPHICAL INFORMATION SYSTEMS (GIS) TECHNICIAN CERTIFICATE

ERTH 1030	Earth Sciences with Lab	4
Total Credits		20

¹ this course has a pre-requisite of ENV 1010 Introduction to Environmental Science

² this course has a pre-requisite of ENG 1010 Composition

- Environmental Engineering Technology, AS
- Environmental Engineering Technology: Environmental Health & Safety Management Certificate

Program code: LSGS-CC

Location: Three Rivers

Program Description

The Land Surveying & Geographic Information Systems (GIS) Technician Certificate is designed to meet the educational requirements of a prospective Land Surveying and GIS technician. Technicians in this field generate, analyze, interpret, and communicate data derived by using Land Surveying and GIS/GPS equipment, hardware, and software applications as well as the use of drones for mapping. They may also set up and maintain GIS databases or websites, create maps and models for application of data, and provide technical support to users or clients. Surveying and GIS is applicable to many industries and occupations, including, but not limited to, engineering firms, agriculture, public safety (fire, rescue, and police), public health, transportation, facilities, land and utilities planning, and management. Land Surveying and GIS technicians possess outstanding decision-making skills, listening skills, and problem-solving skills.

Learning Outcomes

Students will:

1. apply their knowledge within environmental settings to solve specific engineering, ecological, and social problems.
2. demonstrate skills using land surveying equipment and be familiar with the concept of the use of drones for GIS mapping.
3. demonstrate familiarity with key terms, concepts, principles, methods, and techniques of geographical and geospatial information and data analysis.
4. demonstrate excellent written and oral communication skills.

Certificate Requirements

Code	Title	Credits
Required Courses		
Choose one of the following:		3
ENVE 1100	Environmental Regulations ¹	
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ENVE 1500	Geomatics Spatial Analysis	3
ENVE 2500	Geomatics	4
ENVE 2990	Environmental Issues Seminars ²	3
ARCH 1012	Introduction to Geographic Information Systems	3