# GIS Technology Course No. 21058 Credit: 1.0

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| **Student name:**  |  | **Graduation Date:** |  |

Pathways and CIP Codes:Web & Digital Communications (11.1004)

Course Description: **Technical Level:** Geospatial Technology courses provide students with experiences pertaining to the study of geographic information systems (GIS), global positioning systems (GPS), remote sensing (RS), digital image processing simulator (DIPS), Geodesy, automated cartography (Auto-Carto), land surveying (LS), and navigation. These courses may use spatial analysis models and guidelines for integrating, interpreting, analyzing, and synthesizing geographic data, with a focus on both the implications and limitations of such technologies. Other topics may include interfacing with telecommunications and automated database management systems.

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: Click or tap here to enter text.

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Identify and describe careers in Geospatial and Geographic Information Systems. |  |
| 1.2 | Identify key figures and major innovations in the history of progression of diagrams, charts, maps, and projections. |  |
| 1.3 | Distinguish between diagrams, charts, maps and projections and identify specific features you would utilize to recognize each and how those features provide utility. |  |
| 1.4 | Of charts, maps, and projections, identify the primary usage, where each could be co-utilized, and where each has specific usage. |  |
| 1.5 | Create examples of typical keys/legends for sample diagrams, charts, maps, and projections that would illustrate awareness of usage. |  |
| 1.6 | Identify occupations, activities, and specializations and the types of specific utilization required of particular diagrams, charts, maps, and projections in each of these areas. |  |
| 1.7 | Identify and describe methods used to collect data for construction of diagrams, charts, maps and projections; describe modern and historic equipment. |  |
| 1.8 | Identify the file types associated with various types of data and various utilized formats; measurement, axis, reference, scale -- Excel, ArcGIS, PDF, SQL, etc |  |
| 1.9 | Identify the file types associated with imaging [vector, raster, shapefiles, DWG, GML, TIF, GIF etc], and their potential usage, advantages, and disadvantages. |  |
| 1.10 | Describe shapefiles and how their utilization impacts projection and can facilitate orientation. |  |
| 1.11 | Describe the impact/facilitation of computers on collection and management of data in this field. Give examples of data that might be included; temperature, direction, elevation & distance, volume, etc. |  |
| 1.12 | Describe the impact/facilitation of computers on the projection/representation of data. Give examples such as graphs, projections, etc. |  |
| 1.13 | Recognize various tools utilized in merging data with representation such as Web Feature Service (WFS), XML/GML, OpenGIS, SOAP, etc. |  |
| 1.14 | Explain the implementation of points, polylines, and polygons in representations and why each is essential to communicate necessary imagery. |  |
| 1.15 | Identify industry standards, standards bodies, consortiums, and reference models in the GIS/Geospatial industry. |  |
| 1.16 | Identify potential legal issues associated with Geospatial information. |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

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