GIS

UNIT CODE: LSM/CU/LM/CC/05/6/A

Relationship to Occupational Standards

This unit addresses the unit of competency: apply principles of GIS

Duration of Unit: 96 hours

Unit Description

This unit describes the competencies required by a cartographer to collect data, pre-process data, process data, present data, store and archive data and design and publish web-based maps

Summary of Learning Outcomes

1. Collect data
2. Pre-process
3. Process data
4. Store and archive data

Learning Outcomes, Content and Suggested Assessment Methods

Learning outcome	Content	Suggested Assessment Methods
1. Collect data	❑ Components of GIS ❑ Sources of mapping data ❑ Methods of data collection ❑ Data collection equipment ❑ Data models ❑ Data digitization	❑ Observation ❑ Oral Questioning ❑ Written Tests ❑ Projects
2. Pre-process data	❑ Data cleaning ❑ Data selection ❑ Checking of projections ❑ Harmonizing scales ❑ Data evaluation	❑ Observation ❑ Oral Questioning ❑ Written Tests ❑ Projects
3. Process data	❑ Geo-referencing ❑ Digitization ❑ Editing ❑ Layering ❑ Overlay ❑ Attributes entry ❑ Creation of Geo-database	❑ Observation ❑ Oral Questioning ❑ Written Tests ❑ Projects

	❑ Map design	
4. Present data	❑ Arranging data layer ❑ Designing map layouts ❑ Web maps are published ❑ Map is exported ❑	❑ Observation ❑ Oral Questioning ❑ Written Tests ❑ Projects
5. Store and archive data	❑ Cataloguing ❑ Archiving devices ❑ Cloud archiving ❑ Data organization ○ Partitioning drives ○ Spatial indexing ○ metadata ❑ Data compression	❑ Observation ❑ Oral Questioning ❑ Written Tests ❑ Projects

Suggested Delivery Methods

- lectures
- Group discussions
- Demonstration by trainer
- Exercises by trainee

Recommended Resources

- Data
- Computers with GIS software.
- Plotters and printers
- Projectors
- Smart boards
- Data collection equipment
- Scanners
- Servers
- Archiving devices
- Internet