

## **GEOGRAPHICAL INFORMATION SYSTEM**

**ISCED UNIT CODE:** 0811 551 08A

**TVETCDACC UNIT CODE:** AQ/CU/PN/CC/01/6/MA

### **Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Apply Geographical information system.

**Duration of Unit:** 120 HOURS

### **Unit Description**

This unit covers the competencies required to apply information systems it involves applying GIS and remote sensing techniques, performing geo-graphic communication and, producing geo-maps.

### **Summary of learning outcomes**

By the end of this unit of learning, the trainee should be able to:

S/No	Learning Outcomes	Duration (Hours)
1.	Apply GIS and remote sensing techniques	40
2.	Perform geo-graphic communication	40
3.	Produce geo-maps	40
<b>Total</b>		<b>120</b>

### **Learning Outcomes, Content and Suggested Assessment Methods**

Learning Outcome	Content	Suggested Assessment Methods
1. Apply GIS and remote sensing techniques	1.1 Objectives and guiding principles 1.2 Management of ecosystems and sustainable natural resource 1.3 Environmental stewardship	<ul style="list-style-type: none"><li>• Practical</li><li>• Project</li><li>• Third party report</li><li>• Portfolio of evidence</li><li>• Written tests</li><li>• Oral questioning</li></ul>

	<p>1.4 Environmental quality and health</p> <p>1.5 Environmental governance laws</p>	
2. Perform geographic communication	<p>2.1 Developing digital maps as per Open Geospatial Consortium</p> <p>2.2 Presenting digital maps as per Open Geospatial Consortium</p> <p>2.3 Generating graphs as per Open Geospatial Consortium</p> <p>2.4 Image geo-referencing and processing as per Open Geospatial Consortium</p> <p>2.5 Generation of digital models as per Open Geospatial Consortium</p>	<ul style="list-style-type: none"> <li>• Practical</li> <li>• Project</li> <li>• Third party report</li> <li>• Portfolio of evidence</li> <li>• Written tests</li> <li>• Oral questioning instruction</li> </ul>
3. Produce geo-maps	<p>3.1 Generation of maps per Federal Geographic Data Committee</p> <p>3.2 Compilation and design of maps as per Federal Geographic Data Committee</p> <p>3.3 Projection of coordinate reference maps systems as per Federal Geographic Data Committee</p>	<ul style="list-style-type: none"> <li>• Practical</li> <li>• Project</li> <li>• Third party report</li> <li>• Portfolio of evidence</li> <li>• Written tests</li> <li>• Oral questioning</li> </ul>

### Suggested methods of delivery

- Project
- Demonstration
- Practicals

- Discussions
- Direct instruction

**Recommended Resource for 25 trainees**

S/No	Item/Category	Description/Specification	Quantity	Recommended Ratio (Item: Trainee)
A	<b>Learning Materials</b>			
	Text books and E-Learning materials	Survey and statistic books	5	1:5
B	<b>Learning Facilities &amp; infrastructure</b>			
	classroom		1	1:25
C	<b>Consumable materials</b>			
	notebooks	A4 SIZE	25	1:1
	Flip chart		1	1:25
D	<b>Tools and Equipment</b>			
	Projectors	EPSON 2788 LUMEN	1	1:25
	Computers	Any brand-5 <sup>th</sup> generation and above COi5	5	1:5
	internet	Reliable and fast		
	GPS device		5	1:5