

## **GEOGRAPHICAL INFORMATION SYSTEM**

**UNIT CODE: 0532 551 13 A**

**TVET CDACC UNIT CODE: AGR/CU/AP/CC/06/6/MA**

### **Relationship to Occupational Standards**

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

**Duration of Unit: 40 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, the learner should be able to:

<b>S/No</b>	<b>Learning Outcomes</b>	<b>Duration (Hours)</b>
1.	Apply GIS and remote sensing techniques	10
2.	Perform geo-graphic communication	20
3.	Produce geo-maps	10
<b>Total</b>		<b>40</b>

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

<b>Learning Outcome</b>	<b>Content</b>	<b>Suggested Assessment Methods</b>
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 1.4. Environmental quality and	<ul style="list-style-type: none"><li>• Written assessment</li><li>• Practical</li><li>• Projects</li><li>• Third party report</li><li>• Portfolio of evidence</li></ul>

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

### Suggested methods of delivery

- Project
- Demonstration
- Practicals
- Discussions
- Direct instruction

### Recommended Resource for 25 trainees

<b>S/No</b>	<b>Item/Category</b>	<b>Description/Specification</b>	<b>Quantity</b>	<b>Recommended Ratio (Item: Trainee)</b>
<b>A</b>	<b>Learning Materials</b>			
	Text books and E-Learning materials	Survey and statistic books	5	1:5
<b>B</b>	<b>Learning Facilities &amp; infrastructure</b>			
	classroom		1	1:25
<b>C</b>	<b>Consumable materials</b>			
	notebooks	A4 SIZE	25	1:1
	Flip chart		1	1:25
<b>D</b>	<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