NATURAL RESOURCE ECONOMICS

ISCED UNIT CODE: 0521 441 09A

TVETCDACC UNIT CODE: ENV/CU/ENT/CC/02/5/MA

UNIT DURATION: 100 HOURS

Relationship to Occupational Standards

This unit addresses the Unit of Competency**: Apply natural resource economics**

Unit Description

This unit covers the competencies required to apply natural resource economics, it involves applying economics principles of natural resource, determining commodity prices, interpreting production function curves, applying tragedy of the commons, applying sustainable development goals.

Summary of Learning Outcomes

easytvet.com

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

S/No	Learning Outcomes	Duration (Hours)
1.	Apply economics principles of natural resource,	20
2.	Determine commodity prices,	20
3.	Interpret production function curves,	40
4.	Apply tragedy of the commons,	30
5.	To apply sustainable development goals	30
Total		**140**

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1.Apply economics principles of natural resource	**Theory** **1.1** Principles of natural resources 1.1.1 Definition of natural resources 1.1.2 Types of natural resources 1.2 Data Collection Tools 1.2.1 Types of tools used for data collection in natural resource management 1.3 Natural Economic Resource Data Management 1.3.1 Data Management Principles 1.4 Economic criteria 1.4.1 Monitoring Economic Criteria 1.4.2 Work Procedures for Monitoring Economic Criteria 1.4.3 Challenges in Monitoring Economic Criteria 1.5 Command and control standards 1.5.1 Definition of CAC Standards 1.5.2 Types of CAC Standards 1.5.3 Purpose of CAC Standards 1.5.4 Implementation of CAC Standards 1.5.5 Economic Evaluation of Command-and-Control Policies **Practice** 1.6 Conduct a basic Cost-Benefit Analysis for a natural resource project	• Practical • Written tests • Individual/group assignment • Projects • Interviews/ Oral questions • Third party • Case Studies

easyvet.com

2. Determine commodity prices	2.1 Commodity Prices 2.1.1 Natural Resource Prices 2.1.2 The process of determining the market value of natural resources 2.1.3 Importance of pricing natural resources 2.1 Resource price allocation 2.3.1 Definition and Importance resource price allocation 2.3.2 Work Procedures for Implementing Pricing Allocation 2.3.2.1 Institutional Guidelines 2.3.2.2 Allocation Methods 2.2 Property Right Approaches 2.4.1 Importance of Property Rights 2.4.2 Implementing Property Right Approaches 2.4.3 Property Rights and Economic Development 2.3 Market Failure 2.5.1 Types of Market Failure in Natural Resource 2.5.2 Market Demand and Its Role in Resource Allocation 2.5.3 Tools for Monitoring Market Failure 2.5.4 Role of Government and Institutions **Practice** 2.4 Conduct market demand analysis and identify market failures	• Practical • Written tests • Individual/group assignment • Projects • Interviews/ Oral questions • Third party • Case Studies
3.Interpret	**Theory**	• Practical

easyweb.com

production function curves	3.1 Definition of terms 3.1.1 Demand 3.1.2 Supply 3.1.3 Demand analysis 3.1.4 Supply analysis 3.1.5 Equilibrium Price 3.2 Factors Affecting Supply and Demand 3.3 Shifts in Supply and Demand 3.4 Natural Resources 3.4.1 Types of Natural Resources 3.4.2 Economic Importance of Natural resource 3.4.3 Resource Scarcity 3.4.4 Economic Value of Natural Resources 3.5 Production Decisions Based on Market Demand 3.5.1 Market Demand in Production Decision-Making 3.5.2 Production Strategies Based on Demand 3.6 Production Relationship Based on Input and Output Performance in an Agricultural Enterprise 3.7 Principles of Production Function Based on the Nature of Agricultural Enterprise **Practice** 3.8 Implement sustainable practices in a simulated environment	• Written tests • Individual/group assignment • Projects • Interviews/ Oral questions • Third party • Case Studies

easytvet.com

4. Apply tragedy of the commons	**Theory** 4.1 Common environmental resources 4.1.1 Types of Environmental Common Resources 4.1.2 Work Procedures for Resource Identification . 4.2 Environmental common resources utilization 4.2.1 Data Collection Tools 4.2.2 Data Collection Protocols 4.3 Utilization Threats to Environmental Common Resources 4.3.1 Threat Assessment Techniques 4.3.2 Types of threats in common resources 4.4 Utilization Models for Environmental Common Resources 4.4.1 Common utilization modes 4.4.2 Effectiveness of the models **Practice** 4.5 Practice identification of common resources using field surveys and GIS tools	• Practical • Written tests • Individual/group assignment • Projects • Interviews/ Oral questions • Third party • Case Studies
5. Apply sustainable development goals	**Theory** 1.1 SDG Models identification 5.1.1 Overview of SDGs and their importance in sustainable development 5.1.2 Key principles and objectives of Agenda 2 5.2 SDG Models application	• Practical • Written tests • Individual/group assignment • Projects • Interviews/ Oral questions

easytvet.com

	5.2.1 Model Development 5.2.2 Implementation Strategies **Practice** 5.3 Develop and apply SDG models in simulated environments	• Third party • Case Studies

Suggested Methods of Instruction

- Demonstration
- Role playing
- Group discussion
- Direct instruction

Recommended Resources for 25 trainees

S/No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	**Learning Materials**			
1.)	Textbooks		25pcs	1:1
2.)	Reading Materials		25 pcs	1.1
3.)	Policy Documents		25 pcs	1.1
B	**Learning Facilities & infrastructure**			
1.)	Lecture/theory room		1	1:25
C	**Tools and Equipment**			
1.)	Analytical Tools		25 pcs	1:1

easyvet.com