

## Department of Applied Sciences Environmental Sciences Course Descriptions



### Certificate Level

ENVS 1200

Fundamentals of Environmental Sciences

Credit Hours : 3

Contact Hours : 4

Pre-requisites : 0

Type of Course : **Departmental Requirement**

Passing Grade : C-

Course Description :

This course will give the student general introduction to fundamentals of environmental sciences and addresses relationships among ecological resources in the ecosystems. The course also discusses human impact on the natural resources and the way to approach our ecosystems sustainably.

### Diploma Level

ENVS 2101

Principles of Environmental Sciences

Credit Hours : 3

Contact Hours : 4

Pre-requisites : **ENVS 1200**

Type of Course : **Specialization Course**

Passing Grade : C

Course Description :

This course introduces the concepts and principles of environmental sciences and provides basic background in some important environmental issues to enable a proper understanding of how people can live sustainably on their environment. This prepares the students to the higher courses in applied environmental science.



ENVS 2201

Introduction to Environmental Policy and Implementation

Credit Hours : 3

Contact Hours : 3

Pre-requisites : **ENVS 2101**

Type of Course **Specialization Course**

Passing Grade: **C**

Course Description :

Policy system and implementation on the management of human activities that reduce or mitigate harmful effects on nature and natural resources

ENVS 2202

Pollution Sources and Control I

Credit Hours: 3

Contact Hours: 4

Pre-requisites: **ENVS 2101**

Type of Course: **Specialization Course**

Passing Grade: **C**



Course Description

This course intends to provide general understanding of pollution and the role of man in damaging the environment. The course will emphasize on sources of air, water, soil, noise and electromagnetic field pollutions, and methods of controlling or minimizing these types of pollution.

ENVS 2203

Field Study and Laboratory Techniques in Environmental Sciences

Credit Hours 3

Contact Hours 6

Pre-requisites **LABT 1201**

Type of Course **Specialization Course**

Passing Grade: **C**

Course Description

Collection of samples and other data gathering techniques done in the field and in the laboratory for Environmental Science researches.

ENVS 2204 / ENVS 2301

Project IA

Project IB

Credit Hour: 3 / 3

Contact Hours 6 / 6

Pre-requisites ENVS 2101, LABT 1201 / ENVS 2204

Co-Requisite: ENVS 2203

Type of Course Specialization Course

Passing Grade: C

Course Description

An introductory course in environmental sciences research. Basic concepts of research in applied science will be discussed giving emphasis on the parts of a research proposal and a research paper

### Higher Diploma Level

ENVS 3101

Biodiversity and Nature Conservation

Credit Hours : 3

Contact Hours : 4

Pre-requisites : ENVS 2101

Type of Course : Specialization Course

Passing Grade : C

Course Description :

This course introduces the role and importance of biodiversity and natural resources, describes different approaches to conserve natural ecosystems and reviews some of the challenges associated with implementing conservation.



ENVS 3102

Environmental Toxicology

Credit Hours : 3

Contact Hours : 4

Pre-requisites : ENVS 2101

Type of Course : Specialization Course

Passing Grade : C

Course Description :

Introduction to eco-toxicological principles, methods and its management

ENVS 3103

Hazardous Waste Management

Credit Hours : 3

Contact Hours : 4

Pre-requisites : **ENVS 2202**

Type of Course : **Specialization Course**

Passing Grade : **C**



Course Description :

The course introduces some management practices in handling, treating and disposing hazardous wastes.

ENVS 3104

Chemistry of the Environment

Credit Hours : 3

Contact Hours : 4

Pre-requisites : **CHEM 2104, CHEM 2201**

Type of Course : **Specialization Course**

Passing Grade : **C**

Course Description :

The course introduces the students to the principles of Chemistry which are very useful and linked to the study of Environmental Sciences. It develops in the students the appreciation of the application of general chemical principles to improve and preserve the quality of the environment, understand the methods of transport and accumulation of metals and organic compounds in the environment, describe analytical techniques for the assessment of chemical substances in the environment

ENVS 3201

Environmental Impact Assessment and Compliance Inspection

Credit Hours : 3

Contact Hours : 4

Pre-requisites : **ENVS 3103**

Type of Course : **Specialization Course**

Passing Grade : **C**

Course Description :

This course introduces some important procedures and processes of environmental impact assessment and monitoring of compliance.

ENVS 3202  
Ecotourism Management

Credit Hours : 3  
Contact Hours : 4  
Pre-requisites : 0  
Type of Course : **Specialization Course**  
Passing Grade : C



Course Description :

Concept, theory, history, terminology and practices in ecotourism planning and management

ENVS 3203  
Freshwater Ecology

Credit Hours : 3  
Contact Hours : 4  
Pre-requisites : **ENVS 2101**  
Type of Course : **Specialization Course**  
Passing Grade : C

Course Description :

Discovering the richness and diversity of the freshwater ecosystem as a unique and important part and parcel of the earth. How to protect the freshwater ecosystem and its biodiversity are included in the discussion

Baccalaureate Level

ENVS 4101  
Marine Ecology and Coastal Restoration

Credit Hours : 3  
Contact Hours : 4  
Pre-requisites : **ENVS 2101**  
Type of Course : **Specialization Course**  
Passing Grade : C

Course Description :

Discovering the richness and diversity of the marine environment as a unique and important part of life on earth. Coastal restoration will also be included

ENVS 4102

Bio-Safety

Credit Hours : 3

Contact Hours : 4

Pre-requisites : 0

Type of Course : **Specialization Course**

Passing Grade : C



Course Description :

Research, collection, and ethics on the utilization of biological and genetic resources; observance in the elimination of potential risks from biotechnology and its products.

ENVS 4103

Waste Water Management

Credit Hours : 3

Contact Hours : 4

Pre-requisites : **ENVS 3104**

Type of Course : **Specialization Course**

Passing Grade : C

Course Description :

Principles and practices in managing domestic and industrial wastewater

ENVS 4104

Pollution Sources and Control II

Credit Hours : 3

Contact Hours : 4

Pre-requisites : **ENVS 2202**

Type of Course : **Specialization Course**

Passing Grade : C

Course Description :

This course intends to provide advance topics in environmental pollution and the methods of minimizing and controlling major classes of environmental pollutants.

ENVS 4201

Environmental Monitoring System and Data Analysis

Credit Hours : 3

Contact Hours : 3

Pre-requisites : **ENVS 3102**

Type of Course : **Specialization Course**

Passing Grade : **C**

Course Description :

Monitoring systems for environmental contaminants; assessing consequences on natural resource management and pollution risks; and application of bioremediation technologies

The course is also designed to enable the students how to conceptualize a problem, acquire, process, analyze and properly interpret environmental data generated

ENVS 4202

Remote Sensing

Credit Hours : 3

Contact Hours : 4

Pre-requisites : 0

Type of Course : **Specialization Course**

Passing Grade : **C**



Course Description :

Introduction to remote sensing and geographical information system as they are applied for explaining events, predicting outcomes, and planning strategies in managing the environment

ENVS 4203

Disaster Management

Credit Hours : 3

Contact Hours : 4

Pre-requisites : 0

Type of Course : **Specialization Course**

Passing Grade : **C**

Course Description :

Understanding how natural and man-made disasters happen, their consequences and approaches in managing them

ENVS 4204

Environmental Advocacy and Awareness

Credit Hours : 3

Contact Hours : 3

Pre-requisites : **ENVS 2201**

Type of Course : **Specialization Course**

Passing Grade : **C**

Course Description :

Approaches in creating public awareness on the importance of environmental conservation; planning and implementing environmental advocacy programs.

ENVS 4205 / ENVS 4301

Project IIA

Project IIB

Credit Hours : 3 / 3

Contact Hours : 6 / 6

Pre-requisites : **ENVS 2301 / ENVS 4205**

Type of Course : **Specialization Course**

Passing Grade : **C**

Course Description :

Addressing urgent global environmental problems such as global warming, ozone depletion, cyclones and desertification by conducting and presenting experimental research and current issues in environmental science

