

**NATIONAL BOARD FOR TECHNICAL EDUCATION**



**CURRICULUM AND COURSE SPECIFICATION**

**FOR**

**NATIONAL DIPLOMA IN EPIDEMIOLOGY AND  
DISEASE CONTROL TECHNOLOGY**

**DEVELOPED IN COLLABORATION WITH**

**ENVIRONMENTAL HEALTH OFFICERS REGISTRATION  
COUNCIL OF NIGERIA (EHORECON), ABUJA**

**MARCH, 2021**

## GENERAL INFORMATION

### 1.0 PROGRAMME NOMENCLATURE:

National Diploma (ND) in Epidemiology and disease control Technology

### 2.0 PROGRAMME GOAL:

The National Diploma Programme in Epidemiology and disease control Technology is designed to provide Middle level epidemiological personnel that will assist in epidemiological and disease control activities in communities.

### 3.0 PROGRAMME PHILOSOPHY

### 4.0 OBJECTIVES OF THE PROGRAMME:

At the end of the programme the diplomate should be able to:

- i) Carry out rudimentary Epidemiological functions
- ii) Organize Epidemiological and disease control information in the community
- iii) Participate in the development of information, Education and communication materials at the community level
- iv) Assist communities identify their Health challenges
- v) Assist in facilitating surveillance and disease notification

### 5.0 ENTRY REQUIREMENTS

The minimum entry requirements into the ND Epidemiology and disease control Technology programme are:

- Five (5) credit passes in: WASC, NECO or GCE 'O' Level; at not more than two (2) sittings.
- The subject combination must include: English, Mathematics, Biology/Health Science, Chemistry, Physics and Geography
- Environmental Health Assistant Certificate (with CGPA not less than 2.50) from accredited programme/institution.

### 6.0 STRUCTURE/DURATION OF THE PROGRAMME:

- The ND Epidemiology and disease control Technology is a terminal programme structured to last for two (2) years (four semesters) of classroom work, laboratory and workshop practices in an accredited primary or secondary health institution.
- Each semester shall be for 17-18 weeks, made up as follows:  
15 contact weeks of teaching (i.e lectures and practical sessions etc) and  
2 -3 weeks for registration, tests, quizzes and examinations.

### 7.0 CURRICULUM:

The syllabus of the ND Epidemiology and disease control Technology programme consists of four (4) main components namely:

General studies/General education courses

Foundation courses

Professional courses

Project Report.

### 8.0 ASSESSMENT CRITERIA:

	Classwork /practical &Laboratory Works	Semester Examinations	Total
Theory	10	30	40
Practical	20	40	60
<b>Total</b>	30	70	<b>100</b>

## **9.0 AWARD OF NATIONAL DIPLOMA**

The National Diploma certificate shall be awarded by the authority of the Academic Board of the Institution. The conditions for the award of National Diploma in Epidemiology and disease control Technology Certificate include the following:

- i) Satisfactory performance in all prescribed course work/assignments, tests/quizzes, workshop practice, laboratory work field trip etc.
- ii) Satisfactory performance in all semester examinations.
- iii) Satisfactory completion of written project/seminar papers.
- iv) Completion of a minimum of between 72 and 80 semester credit unit

National Diploma shall be awarded based on the following classifications:

Distinction	-	CGPA 3.50 - 4.00
Upper Credit	-	CGPA 3.00 - 3.49
Lower Credit	-	CGPA 2.50 - 2.99
Pass	-	CGPA 2.00 - 2.49

Additionally, Candidates must pass the professional certification examination administered by the Environmental Health Officers Registration Council of Nigeria (EHORECON) in the second semester of ND II (Year Two). This will enable the graduate to be inducted into Environmental Health Profession and be temporarily licensed to practice the profession as a supervisee Epidemiology and disease control Assistant pending the completion of the one-year mandatory supervised Field experience (SUPFE). The professional certification examination shall involve the following papers:

- i) Oral examination
- ii) Practical examination
- iii) Theory examination made up of essay and multi choice questions (MCQ) of 50. The Essay and MCQ will test the knowledge of Public Health

## **10.0 ACCREDITATION OF PROGRAMME**

This programme offered at the ND Levels shall be accredited by the NBTE in conjunction with EHORECON before diplomates can be awarded the ND certificates. Details about the process of accrediting the programme for the award of ND are available on the Board's website [www.nbte.gov.ng](http://www.nbte.gov.ng) or through correspondence addressed to: The Executive Secretary, Attention – Monotechnic Programmes Department., NBTE, Plot 'B' Bida Road, P.M.B 2239, Kaduna, Nigeria.

## **11.0 LOG BOOK:**

There shall be two types of Log Books

- i) A personal log book for each course is to be kept by the students. It shall contain all the recordings of the day-to-day, weekly and semester practical works/activities from day one to the end of the programme. This is to be checked, marked appropriately and endorsed by all lecturers concerned at the end of every week.
- ii) An end-of-school (Post Diploma) log book maintained by a Supervisee Epidemiology and disease control Assistant for the entry of their daily/weekly Field Experience work in the Public Health Department/Unit of Supervisee's posting. The log book shall be duly signed by the Industry-based Supervisor on monthly basis. At the end of the EHORECON-supervised fifty-two-week-long SUPFE, the Supervisee receives a Certificate of SUPFE completion from EHORECON

## **12.0 FINAL YEAR PROJECTS:**

Final year students of the programme are expected to carry out project works, either on individual or group basis (only 2 per group). The project topics should as much as possible be related to the programme and serve as useful tool for further Research and /or Development Projects should be properly supervised and their reports well presented. The institution should develop formats for presenting and grading of projects. The formats should be adopted as applied to each stakeholder.

## CURRICULUM TABLE FOR NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL PROGRAMME

### 100 LEVEL, FIRST SEMESTER

S/N	COURSE CODE	NAME	L	T	P	CU	CH	PRE-REQUISITE COURSES
1	EDC111	Introduction to Epidemiology	2	-	-	2	30	
2	EDC112	Communicable Diseases I	2	-	-	2	30	
3	EDC113	Introduction to Microbiology	2	-	1	3	45	
4	EDC114	Introduction to Human Anatomy and Physiology	2	-	1	3	45	
5	EDC115	Introduction to Biostatistics	2		1	3	45	
6	EDC116	Primary Health Care	2	-	1	3	45	
7	GNS101	Use of English	2			2	30	
8	EHT111	Introduction to Environmental Health	2	-	-	2	30	
9	COM 111	Introduction to Computer	1	-	2	3	45	
10	GNS 127	Citizenship Education I	2	-	-	2	30	
11	GNS230	General Biology	2	-	1	3	45	
<b>TOTAL</b>			<b>21</b>		<b>7</b>	<b>28</b>	<b>420</b>	

### 100 LEVEL, SECOND SEMESTER

S/N	COURSE CODE	NAME	L	T	P	CU	CH	PRE-REQUISITE COURSES
1	EDC124	Non-Communicable Diseases	2	-	-	2	30	
2	EDC125	Immunology in Public Health	2	-	1	3	45	
3	EDC126	Health Agencies	2	-	1	3	45	
4	EDC127	Accident Prevention and Emergencies	2	-	1	3	45	
5	GNS102	Communication in English	2	-	-	2	30	
6	COM121	Computer Application Packages	2	-	-	2	30	
7	GNS 127	Citizenship Education II	2	-	-	2	30	
8	EED 126	Introduction to Entrepreneurship	2	-	1	3	45	
9	EHS111	Applied Physics	2	-	1	3	45	
10	EHS112	Applied Chemistry	2	-	1	3	45	
		<b>TOTAL</b>	<b>20</b>	<b>-</b>	<b>6</b>	<b>26</b>	<b>390</b>	

**200 LEVEL, FIRST SEMESTER**

S/N	COURSE CODE	COURSE TITTLE	L	T	P	CU	CH	PRE- REQUISITE COURSES
1	EDC123	Communicable Diseases II	1	-	1	2	30	
2	EDC211	Introduction to Human Nutrition	2	-	1	3	45	
3	EDC212	Public Health Administration	2	-	-	2	30	
4	GNS213	Medical Sociology	2	-	-	2	30	
5	EDC214	Health Education and Promotion	2	-	1	3	45	
6	EDC215	Maternal and Child Health	2	-	1	3	45	
7	EDC216	Introduction to Pharmacology	2	-	-	2	30	
8	GLT111	General Laboratory Technique	1	-	1	2	30	
9	EHT217	Disease Surveillance	2	-	1	3	45	
10	EED 216	Practice of Entrepreneurship	1	-	1	2	30	
11	GNS228	Research Methodology	2	-	-	2	30	
		<b>TOTAL</b>	<b>19</b>	<b>-</b>	<b>7</b>	<b>26</b>	<b>390</b>	

**200 LEVEL, SECOND SEMESTER**

S/N	COURSE CODE	COURSE TITTLE	L	T	P	CU	CH	PRE- REQUISITE COURSES
1	EDC221	Project	2	-	4	6	90	
2	EDC 222	Field Experience/ Trips	-	-	4	4	60	
3	EDC223	Seminar	1	-	1	2	30	
4	EDC224	Clinical Posting	2	1	3	6	90	
5	EHT202	Entomology and Pest Control	2	-	1	3	45	
6	EDC226	Health Economics	2	-	-	2	30	
7	EDC227	Public Health Laboratory Instrumentation	1	-	1	2	30	
		<b>TOTAL</b>	<b>10</b>	<b>1</b>	<b>14</b>	<b>25</b>	<b>375</b>	

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: INTRODUCTION TO EPIDEMIOLOGY</b>						
<b>COURSE CODE: EDC 111</b>						
<b>DURATION:</b>	Lecture: - 30 HRS	Tutorial: Nil	Practical: - Nil	Total: 30 HRS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> The course is designed to acquaint students with basic knowledge and skills on the determinants and distribution of diseases and events associated with diseases in the human population (Human, animal and plants).						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1. State the concept of epidemiology and infectious diseases 2. Explain the various modes of disease transmission 3. Outline the principles of control of common communicable diseases 4. Explain the general principles and steps of investigation of epidemics in a community 5. State the general principles of surveillance, record keeping and notification 6. Plan and implement programmes for the control of endemic and epidemic diseases. 7. Differentiate human, animal and plant diseases						
<b>SPECIFIC OBJECTIVE: 1.0</b> State the concept of epidemiology and infectious diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Epidemiology concepts in an infectious diseases 1.1 Define epidemiology 1.2 Define the following terms: disease, infection, illness/sickness, symptoms, signs, incubation, incidence, prevalence, communicable disease, endemic epidemic, pandemic, hyper-endemic and meso-endemic antibodies, immunity, surveillance, causative agent reservoir of infectious, carrier, control, preservation, resistor, antigen, disease out break 1.3 Describe the infectious diseases processes	The Teacher should define and explain the terms listed	Projector Text book Internet Lecture notes Charts Pictures Tutorials White board Marker	The Teacher should organize tutorials for the students in groups			Continuous assessment Examination
<b>SPECIFIC OBJECTIVE: 2.0</b> Explain the various modes of disease transmission						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Methods of Diseases Transmission 2.1 Explain the various modes of disease transmission including causative agents in man i. Man ii. Animal	Teacher should explain the modes of transmission listed.	Projector Text book Internet Lecture notes Charts				Continuous assessment Examination

iii Plants iv. Non-living thing 2.2 Explain the following mode of transmission of communicable disease a. contact b. inhalation c. infection d. penetration e. trans-placental infection f. Sexual		Pictures Tutorials White Board Marker				
<b>SPECIFIC OBJECTIVE: 3.0</b> Outline the principles of control of common communicable diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Control measure of common communicable disease 3.1 List the common communicable disease e.g. Typhoid, malaria, Covid-19 etc. 3.2 Mention the causative agents of the disease e.g. bacteria, virus parasite, fungus etc. 3.3 Explain the various methods of control of communicable diseases e.g. Chemotherapy, Environmental, preventive, etc. a. Recognize the infection and the confirmation of diagnosis b. finding the source of infection c. Notifying the disease to the appropriate authority d. Assessing the extend of the outbreak by finding other cases and other exposed persons 3.2 Describe other method of controlling communicable disease viz; a. eliminate reservoir infection b. interrupt the pathway of transmission c. protect the susceptible host d. immunization e. Health education	Teacher should explain the principles for the control of communicable diseases	Projector Text book Internet Lecture notes Charts Pictures Tutorials White Board Marker				Continuous assessment Examination





<b>SPECIFIC OBJECTIVE: 6.0</b> Plan and implement programmes to control endemic and epidemic disease						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
6.1 Explain common strategies for Diseases control and prevention. 6.2 Explain the following types of campaigns for disease prevention and control i Health education ii Mass immunization which includes: a. Fixed centers b. Mobile immunization c. House -to house- campaign d. Community based campaign - Meeting with community leaders to make your intentions known to them -Plan with them the time and venue of campaign. 6.3 Evaluate the outcome of the campaign- plan a campaign programme through one of these methods;	The Teacher should explain how to organize campaign for disease control and evaluate the outcome of the campaign programme through different methods	Public Address system Projector Flip Chart Posters Hand bills Pictures				continuous assessment  Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND)IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: COMMUNICABLE DISEASES I</b>						
<b>COURSE CODE: EDC 112</b>						
<b>DURATION</b>	Lecture: - 30	Tutorial: Nil	Practical: -Nil	Total: 30 HRS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> The course is designed to equip students with knowledge and skill of the epidemiology of communicable diseases						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Explain the concept and epidemiology of Communicable Diseases 2.0 Describe the methods of Disease Transmission 3.0 Explain detection and diagnosis of common diseases						
<b>SPECIFIC OBJECTIVE: 1.0</b> Explain the concept and epidemiology of Communicable Diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

1.1 Define relevant terms e.g. Communicable Diseases, Infection, etc. 1.2 Explain Air borne infection 1.3 Explain Contact infection 1.4 Describe Water borne and food borne diseases 1.5 Define Vector borne diseases and the classes of diseases e.g. a. Zoonotic diseases b. Surface infection 1.6 Explain Emerging and re-emerging infectious diseases 1.7 Expatiate on Hospital Acquired Infections 1.8 Discuss on the Programs for the control of communicable diseases 1.9 Explain the Infectious disease process (Chain of infection) 1.10 Describe the Surveillance of communicable diseases 1.11 Discuss the Process of investigating outbreaks	Teacher to define and explain the terms	Projector Text book Internet Lecture notes Charts Pictures Tutorials White board marker			Projector Text book Internet Lecture notes Charts Pictures Tutorials White board marker	Continuous assessment Examination
<b>SPECIFIC OBJECTIVE: 2.0</b> Describe the methods of Disease Transmission						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Define disease transmission 2.2 Identify the causative agents of communicable/infectious diseases: Virus, Bacteria, Protozoa, Fungi, Helminth, Prion 2.3 Explain modes of communicable disease transmission e.g. mechanical, biological, etc 2.4 Identify sources and roots of disease transmission	Teacher to define disease transmission, identify causative organisms of common diseases and their modes transmission.	Projector Text book Internet Lecture notes Charts Pictures Tutorials White board maker				Continuous assessment Examination
<b>SPECIFIC OBJECTIVE: 3.0</b> Explain detection and diagnosis of common diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 Explain the meaning of Disease detection, diagnosis and screening	Teacher to explain various methods of disease	Projector Text book Internet Lecture notes				Continuous assessment Examination

3.2 Discuss the Identification of common communicable diseases of Public Health Importance	detection and screening.	Charts Pictures Tutorials White board maker				
3.3 State and explain common disease detection procedures						

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: INTRODUCTION TO MICROBIOLOGY</b>						
<b>COURSE CODE: EDC 113</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS		
<b>CREDIT UNITS: 3</b>						
<b>GOAL:</b> This course is designed to introduce the students to the science of microbes and techniques to identify, prevent and control them.						
<b>OBJECTIVE:</b> On completion of the course, the student should be able to:						
1. State the history and scope of microbiology 2. Describe the microscopic examination of microorganisms 3. List microorganisms that cause diseases 4. Explain effects of environmental factors on the growth of microorganisms 5. Explain isolation, cultivation and preservation of different microorganisms 6. Describe the methods for control of microorganisms						
<b>SPECIFIC OBJECTIVE: 1.0 State the history and scope of microbiology</b>						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Narrate the history and scope of microbiology  1.2 Explain the role of micro-organism in public health practice, agriculture, industry etc.	Teacher to narrate the history of microbiology and Microscopy to show the role of different scientist Teacher should explain the role of microorganisms in the Health sector	Projector Text book Internet Lecture notes Charts Pictures Tutorials				Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 2.0 Describe the Microscopic examination of microorganisms</b>						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

Microscopic examination of microorganisms 1.1 Explain the principle of microscopy 1.2 Identify and describe all types of microscope e.g. light, compound, phase contrast and electronic microscope etc. 1.3 Explain the application of each type of microscope in 2.2 above. 1.4 Examine a drop of pond water under the light and compound microscope and identify micro-organisms 1.5 List and describe the various microbial staining techniques e.g. gram stain, gram spore stain etc.	Teacher to explain the different types of microscope and their applications Teacher describes the different types of staining techniques	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Students to identify different types and parts of microscope and observe staining procedures in the laboratory	Provide microscopes and demonstrate their use		Continuous assessment Practical Examination
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**SPECIFIC OBJECTIVE: 3.0** Comprehend Systematic Microbiology

Specific Learning Objectives (Theory)	Teacher Activities	Learning Resources	Specific Learning Objective (Practical)	Teacher Activities	Learning Resources	Evaluation
3.1 Describe the characteristics of micro-organisms 3.2 Differentiate between Prokaryotes and Eukaryotes 3.3 Describe the morphological characteristics of the following groups of micro-organisms i.e. viruses, bacteria, rickettsia, mycoplasma, protozoa, fungi and algae 3.4 List and explain the morphological and biochemical basis for classifying micro-organisms e.g. a). Morphological phase, possession of flagella, capsules, vacuoles, chloroplast etc. b). biochemical/serological tests e.g. oxidase, catalase, hydrolase tests etc. 3.5 Classify the different groups of micro-organisms listed in 3.4 above.	Teacher to explain the basic characteristics of different types of microorganism.  Teacher outlines the scheme for the classification of microorganisms	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Identify different types of microorganisms from different sources	Teacher to demonstrate various types of microorganisms	Projector Video/Audio devices Models Charts Slides Microscopes	Continuous assessment Practical Examination

**SPECIFIC OBJECTIVE: 4** Explain the effects of environmental factors on the growth of microorganisms

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
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4.1 List the factors that promote or inhibit growth of micro-organisms.  4.2 Explain the effect of these factors in different media air, liquid and solid media	Teacher to identify factors that promote or inhibit growth of microorganism in different media.	Projector Text book Internet Lecture notes Charts Pictures Tutorials			Projector Video/Audio devices Models Microscopes and accessories	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 5.0</b> Explain preservation, cultivation and isolation of different micro-organisms						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
5.1 Explain how to prepare different types of culture media. 5.2 Explain methods of cultivation of micro-organisms 5.3 Explain the isolation and cultivation of micro-organisms from natural sources 5.4 Explain the maintenance of pure culture sampling and enumeration technique, collection and transportation of samples, 5.5 Describe the methods of control of microorganisms.	Teacher explains the process of preparing different types of culture media  Teacher to explain techniques for cultivation of microorganisms from natural sources;  and methods of sampling, enumeration and transportation of samples	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Prepare simple culture media for demonstration of different types of microorganism.	Arrange students in different groups for microscopy and preparation of culture media	Projector Video/Audio devices Models Petric dishes	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 6.0</b> Identify methods of control of micro-organisms						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
6.1 List microorganisms of public health importance. 6.2 Describe the principles of prevention and control of micro-organisms in the environment. 6.3 Explain principles and method of disinfection. Explain physical, chemical biological (predators), gaseous and therapeutic methods of controlling microorganisms.	Teacher to list microorganisms of public health importance; explains methods of controlling microorganisms in the environment and their effect on human health	Projector Text book Internet Lecture notes Charts Pictures Tutorials			Projector Video/Audio devices Models	Continuous assessment Practical Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY</b>						
<b>COURSE CODE: EDC 114</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS		
<b>CREDIT UNITS: 3</b>						
<b>GOAL:</b> This course is designed to enable the students explain the organization, structure and functions of the human body.						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1. Explain the human cell structure and its functions 2. Identify different types of human tissues and their functions. 3. Describe the different organs /systems of the body, their structures and functions 4. Describe the structure of the human body. 5. Explain the body fluids, electrolytes and acid-base balance. 6. Explain the homeostatic mechanism of the human body.						
<b>SPECIFIC OBJECTIVE: 1.0</b> Explain the human cell structure and its functions						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Explain the human cell 1.2 Draw a well label diagram of the cell and its components (constituents) 1.3 Describe the different components of the cell 1.4 Explain the functions of the components of the cell 1.5 Identify a typical animal cell under the microscope	Teacher to draw human cell and describe the different components and functions of each components Teacher to show students a typical human cell under a microscope.	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Identify, draw and label a cell from under a microscope	Demonstrate how to obtain materials from any part of the human body	Projector Video/Audio devices Models Microscopes Slides scalpel	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 2.0</b> Identify different types of human tissues and their functions.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

<p>2.1 List different types of tissues and organs in the human body</p> <p>2.2 Draw and label the types of tissues and organs in 2.2 above</p> <p>2.4 Identify locations of the tissues and organs in the human body</p> <p>2.5 Classify the major types of tissues and organs</p> <p>2.6 State the components of blood.</p> <p>2.7 Differentiate between the following blood cells red blood cells, white blood cells and platelets</p> <p>2.8 explain the components of plasma-protein (globulin, albumin), fibrinogen, salts (electrolytes); urea, glucose, water and other substances such as prothrombin, vitamins and enzymes</p> <p>2.9 List the function of blood plasma</p> <p>2.10 State the functions of the different types of tissues</p> <p>2.11 List calcified tissues of the body</p> <p>2.12 Explain the functions of calcified tissues of the body.</p>	<p>Teacher to explain how to identify different types of tissues and organs and their functions.</p> <p>Teacher to draw and label tissues, organs of the human body.</p> <p>Teacher to show students different locations of the tissues / organs of human body</p> <p>Teacher to draw different types of blood cells and list the components of plasma and platelets</p>	<p>Projector</p> <p>Text book</p> <p>Internet</p> <p>Lecture notes</p> <p>Charts</p> <p>Pictures</p> <p>Tutorials</p> <p>Models</p>				<p>Continuous assessment</p> <p>Practical Examination</p>
<b>SPECIFIC OBJECTIVE: 3</b> Describe the different organs/ systems of the body, their structures and functions.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
<p>3.1 Enumerate the different systems of the body e.g. skeletal, muscular, digestive, reproductive, nervous, respiratory etc.</p> <p>3.2 Identify two major groups of bones of the skeletal systems; axial and appendicular</p> <p>3.3 Identify the major bones in each group</p> <p>3.4 State the functions of the skeletal system</p>	<p>Teacher to define and enumerate different systems of the body</p> <p>Teacher to show students how to identify different types of bones/ joints and state the functions of skeletal system</p> <p>Teacher to draw and label different types of bones,</p>	<p>Projector</p> <p>Text book</p> <p>Internet</p> <p>Lecture notes</p> <p>Charts</p> <p>Pictures</p>			<p>Projector</p> <p>Video/Audio devices</p> <p>Models</p>	<p>Continuous assessment</p> <p>Practical Examination</p>

<p>3.5 Draw and label the main bones of the skeletal system</p> <p>3.6 Identify the different types of joints in the skeletal system</p> <p>3.7 List examples of the different types of joints in the skeletal system</p> <p>3.8 Draw and label the major joints in the skeletal system</p> <p>3.9 List the different types of muscles that make up the muscular system</p> <p>3.10 Draw and label different types of muscles in 3.10 above</p> <p>3.11 State the structure differences in the muscles in 3.10 above</p> <p>3.12 Describe the main skeletal muscles according to origin, insert the nerve supply</p> <p>3.13 State the function of the different types of muscles in 3.10 above</p> <p>3.14 Identify the following;</p> <ul style="list-style-type: none"> <li>• Muscles of facial expression</li> <li>• Muscles of facial mastication</li> <li>• Muscles that serve the head</li> <li>• Muscles that serve the chest</li> <li>• Muscles that serve the arm</li> <li>• Muscles that serve the limbs etc.</li> </ul> <p>3.15 List the composition of the cardiovascular system</p> <p>3.16 Draw and label the major components of heart</p> <p>3.17 Describe the functions of the heart</p> <p>3.18 List the composition of the respiratory system</p> <p>3.19 Draw and label the major components of the respiratory system</p> <p>3.20 Describe the mechanism of respiration</p>	<p>muscles, joints and skeletal system of human body</p> <p>Teacher to describe skeletal muscles, state their functions in relation to the origin of nerves supply</p> <p>Teacher to show students how to identify muscles of the face, head, chest, arms and limbs as regards to movement of different parts of human body.</p> <p>Teacher to draw and label the heart, digestive system, respiratory system and list the composition of two organs</p>					
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3.21 Describe the digestive system						
3.22 List the composition of the digestion system						
3.23 Draw and label the major components of the digestive system						
3.24 Describe the process of food digestion						

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: INTRODUCTION TO BIOSTATISTICS</b>						
<b>COURSE CODE: EDC 115</b>						
<b>DURATION</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS		
<b>CREDIT UNITS: 3</b>						
<b>GOAL:</b> The course is designed to provide the students with knowledge of biostatistics in Public health						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Explain the fundamentals of Biostatistics.						
2.0 Explain the interpretation and presentation of Health data using descriptive statistical tools.						
3.0 Conduct statistical tests.						
4.0 Understand vital statistics.						
<b>SPECIFIC OBJECTIVE: 1.0</b> To know the fundamentals of Biostatistics						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Define Biostatistics.	The teacher defines Biostatistics. 1.2 The teacher explains the sources of Biostatistics. 1.3 The teacher explains the uses of Biostatistics.	Books Journal Charts Pictures White marker Board.			Projector Video/Audio devices Models	Continuous assessment Practical Examination
1.2 Explain the sources of Biostatistics.						
1.3 Describe the types of Biostatistics: • Descriptive • Inferential						
1.3 Explain the uses of Biostatistics.						
<b>SPECIFIC OBJECTIVE: 2.0</b> Understand the presentation of health data using descriptive statistical tools						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Compute and present health data using the following statistical tools. a. Measures of central tendency b. Measures of variability	The teacher explains and computes the data while the students listen attentively.	White marker board. Books Charts Pictures				Continuous assessment Practical Examination

c. Graphs, Charts and Tables		Journals.				
<b>SPECIFIC OBJECTIVE: 3.0</b> Compute statistical tests relating to health services						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 Compute Inferential statistical tests using- a) Measures of Association with linear correlation graph. b) Spearman's Rank Order Correlation. c) Pearson Correlation. d) Chi- Square test. e) Student T-test	The teacher explains how to compute the statistical test while the students listen.	White marker board, books, journals, charts, Pictures, Projector.				Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 4.0</b> Understand vital statistics						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
4.1 Define Vital statistics 4.2 Explain: i) Vital event ii) Rate iii) Ratio iv) Proportion 4.3 Discuss types of vital statistics <ul style="list-style-type: none"> <li>• Morbidity statistics</li> <li>• Mortality statistics</li> <li>• Natality statistics</li> <li>• Nuptiality statistics</li> <li>• Migration statistics and</li> <li>• Environmental Sanitation-related statistics</li> </ul> 4.4 Compute morbidity statistics such as incidence rate, attack rate, point prevalence rate, relative risk rate. 4.5 Compute morbidity statistics such as crude death rate, specified death rates, infant mortality.	The teacher computes statistical tests while the students listen.	Pictures Charts Books Projector White marker board.				Continuous assessment Practical Examination

4.6 Calculate Nuptiality statistics such as marriage rate, child-woman ratio, divorce rates, sex ratio and dependency ratio. 4.7 Compute Natality statistics like Birth rate, Fertility rate and rate of natural increase, population doubling time 4.8 Compute migration statistics e.g immigration and emigration rates, net migration rate. 4.9 Compute Environmental sanitation statistics like cheopis index, Aedes-egypti index, sanitation service coverage, occupancy ratio, per capita solid waste generation etc.						
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<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>							
<b>COURSE TITLE: PRIMARY HEALTH CARE</b>							
<b>COURSE CODE: EDC 116</b>							
<b>DURATION:</b>		Lecture: - <b>30</b>	Tutorial:	<b>Practical: -15</b>	Total: <b>45 HRS</b>		
<b>CREDIT UNITS: 3</b>							
<b>GOAL: The course is designed to introduce students to the concept of primary health care and its development in Nigeria.</b>							
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:							
1.0 Describe the historical background, principles, concepts and components of PHC in Nigeria.							
2.0 Explain the structure and health needs of the community							
3.0 Identify the roles of various cadres of health workers in PHC facilities.							
4.0 Explain the process and resources required for effective community mobilization and participation in health care activities							
5.0 Explain the concept of Environmental Scanning							
6.0 Explain the strategies of Health Education and promotion							
<b>SPECIFIC OBJECTIVE: 1.0</b> Describe the historical background, principles, concepts and components of PHC in Nigeria.							
<b>Specific Learning Objectives (Theory)</b>		<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Define Primary Health Care (PHC).		• Lecture • Discussion • Use an organogram to explain PHC set up in Nigeria	Charts, film Textbooks Standing order White board /Markers Multimedia projector/Laptops	Draw an Organogram of the PHC set- up in Nigeria.	Supervise drawing of PHC organogram	Flip Charts with diagram of PHC organogram	Continuous assessment Practical Examination
1.2 Discuss the historical development, concepts and principles of PHC.							
1.3 List the components of PHC.							
1.4 Describe the structure of health care system in Nigeria.							

1.5 Explain an organogram of the PHC set up in Nigeria.						
1.6 Describe the operational level of PHC at the Local Government level.						
1.7 Explain the roles, functions and responsibilities of an EHO PHC						
1.8 Describe the multi-disciplinary, inter-sectoral and team approach to PHC.						
<b>SPECIFIC OBJECTIVE: 2.0</b> Explain the structure and health needs of the Community.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Define Community: <ul style="list-style-type: none"> <li>Family pattern</li> <li>Health pattern</li> </ul> 2.2 Describe a typical community with emphasis on the leadership and decision-making structure 2.3 State functions of a Community. 2.4 Describe the process of identifying community health needs.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Role play</li> <li>Field trip.</li> </ul>	Charts, film Textbooks Standing order White board /Markers Multimedia projector/Laptops	Identify different family patterns in the community Carry out health survey and identify the health needs of the community.	Supervise Practical activities	Community Samples of health or need survey	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 3.0</b> Identify the roles of various cadres of health workers in PHC facilities.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 List the various categories of health workers within the PHC system in Nigeria e.g. EHOs, EHTs, EHAs Physicians, Midwives. Public Health Nurses, Community Health Officers, etc. 3.2 Describe the role of each category of health worker listed in 3.1. 3.3 Explain the collaborative roles of the P.H.C team.	Lecture  Discussion	<ul style="list-style-type: none"> <li>Charts</li> <li>Films</li> <li>PHC Clinics</li> <li>Homes</li> <li>A typical Community</li> </ul>				Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 4.0</b> Explain the process and resources required for effective community mobilization & participation in health care activities.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
4.1 Define Community Mobilization, Participation, awareness, Advocacy and Group dynamics,	Lecture  Discussion	<ul style="list-style-type: none"> <li>Charts,</li> <li>Film</li> </ul>	Interact with different community Structures involved in	Supervise Practical activities	Logistics.	Continuous assessment Practical

4.2 Explain the concept and rationale of community mobilization and participation. 4.3 Explain advocacy process in community mobilization & participation. 4.4 Describe the steps and structures involved in community mobilization		<ul style="list-style-type: none"> <li>• Typical Community set-up.</li> <li>• Vehicle</li> <li>• Multimedia projector</li> </ul>	mobilization and participation.			Examination
<b>Specific OBJECTIVE: 5.0</b> Explain the concept of Environmental Scanning						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
5.1 Explain the term Environmental Scanning 5.2 List the components of Environmental scanning 5.3 Explain the roles of community members in Environmental Scanning 5.4 List the steps used in Environmental scanning 5.5 Explain the roles of community members in Environmental scanning. 5.6 Describe the instruments used in Environmental scanning.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Charts/ films</li> <li>• Typical community</li> <li>• Tools for Situation Analysis</li> </ul>	Describe the process of Environmental scanning, demonstrate use of tools and equipment's		Projector Video/Audio devices Models PHC Clinics Map Tapes GPS Flip charts White card boards Maker Community guide	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE 6.0:</b> Explain the concept and strategies of Health Education and promotion.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Resources</b>	<b>Specific Learning Objectives (Practical)</b>	<b>Teacher Activities</b>	<b>Resources</b>	<b>Evaluation</b>
6.1 Define: i. Health Education ii. Behavior Change Communication (BCC) iii. Behavior modification 6.2 Describe communication skills and group dynamics in Health Education and promotion. 6.3 Explain the principles and methods of 'Behavior Change Communication' (BCC) in Health Education. 6.4 Explain the application of Principle of teaching and learning to BCC.	Lecture       Discussion	Whiteboard/ Marker Textbooks/ journals Multimedia projector Laptops Charts Films. Audio-visual aids	Apply communication skills in PHC setting Carry out health talks or Health Education Prepare and use audio-visual aids for the activities	To guide Demonstration and supervise students activities	Community Community member Health facilities Audio visual Sample of a teaching plan	Continuous assessment Practical Examination

6.5 Explain the importance of Guidance and Counseling in Primary Health Care.						
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<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: USE OF ENGLISH</b>						
<b>COURSE CODE: GNS 101</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial: 0	Practical: -	Total: 30 HRS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to equip students with the necessary skills in the use of English language for effective professional practice.						
<b>GENERAL OBJECTIVE: 1.0</b> Develop appropriate study skills.						
1.0      evelop appropriate study skills. 2.0      Know the nature of language. 3.0      Understand the basic rules of grammar. 4.0      Know the essential qualities of paragraph. 5.0      Appreciate literacy works in English.						
<b>GENERAL OBJECTIVE: 1.0</b> Vocabulary Development						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
<b>Study Skills</b> 1.1      Explain the necessity for acquiring good note taking/making techniques. 1.2      List the methods of note-taking/making. 1.3      Use the dictionary correctly List information sources in the Library. 1.5 Locate information in the sources listed in 1.4 above. 1.6 Identify good reading habits. 1.7 Explain the different methods of reading, viz, scan, skim, normal and study.	<ul style="list-style-type: none"><li>• Explain the necessity for acquiring good note taking/making techniques.</li><li>• List the methods of note-taking/making.</li><li>• Use the dictionary correctly</li><li>• List information sources in the Library.</li><li>• Locate information in the sources listed in 1.4 above.</li><li>• Identity good reading habits.</li><li>• Explain the different methods of reading, viz, scan, skim, normal and study.</li><li>• Use the different methods of reading explained in 1.7 above.</li></ul>	Lectures note  Textbooks  Charts	Practice note taking.  Practice reading	Guide the students on the use of dictionary.  Guide students to practice reading newspaper, novel, and professional books.	Lectures note  Textbooks  Charts	Continuous Assessment  Examination

1.8 Use the different methods of reading explained in 1.7 above.						
<b>SPECIFIC OBJECTIVE: 2.0</b> Know the nature of language.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Explain the concept of language. 2.2 List the characteristics of language. 2.3 Explain the four language skills, viz, speaking, listening, writing, reading. 2.4 Explain the functions of language. List the uses of English 2.5 Language in Nigeria, e.g. as the language of research, government, commerce, etc.	<ul style="list-style-type: none"> <li>Explain the concept of language.</li> <li>List the characteristics of language.</li> <li>Explain the four language skills, viz, speaking, listening, writing, reading.</li> <li>Explain the functions of language.</li> <li>List the uses of English Language in Nigeria, e.g. as the language of research, government, commerce, etc.</li> </ul>	Lectures note  Textbooks  Charts	Demonstrate language skill. eg. Speaking, listening, writing, reading.	Guide students on language skills.	Lectures note  Textbooks  Charts	Continuous Assessment       Examination
<b>GENERAL OBJECTIVE: 3.0</b> Understand the basic rules of grammar.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 Explain grammar 3.2 Explain parts of speech. 3.3 Analyze the use of parts of speech in sentences. 3.4 Correct common errors in the use of parts of speech in sentences. Construct sentences with correct syntactic arrangement. 3.5 List punctuation marks. 3.6 Enumerate the uses of punctuation marks. 3.7 Punctuate a given passage.	<ul style="list-style-type: none"> <li>Explain grammar</li> </ul> Explain parts of speech. <ul style="list-style-type: none"> <li>Analyze the use of parts of speech in sentences.</li> <li>Correct common errors in the use of parts of speech in sentences.</li> </ul> Construct sentences with correct syntactic arrangement. List punctuation <ul style="list-style-type: none"> <li>marks.</li> <li>Enumerate the uses of punctuation marks.</li> <li>Punctuate a given passage.</li> </ul>	Lectures note  Textbooks  Charts	Practice the use of punctuation marks		Lectures note Textbooks  Charts	Continuous Assessment       Examination

[illegible]



5.2 Differentiate between the literary genres. Explain the functions of literature. Explain the terminology of 5.3 prose fiction, e.g. plot setting, characterization etc. Answer an essay question on a given novel.	<ul style="list-style-type: none"> <li>Differentiate between the literary genres.</li> <li>Explain the functions of literature.</li> <li>Explain the terminology of prose fiction, e.g. plot setting, characterization etc.</li> </ul> Answer an essay question on a given novel.			public health.		Examination
<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: INTRODUCTION TO ENVIRONMENTAL HEALTH</b>						
<b>COURSE CODE: EHT 111</b>						
<b>DURATION:</b>	Lecture: - 30 Hrs.	Tutorial: Nil	Practical: - Nil	Total: 30 HRS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> The course is designed to acquaint students with the concepts of environmental health problems and solutions within the community.						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:						
1. Identify the various types of environment. 2. Enumerate the components of environmental health. 3. Explain the concept environmental health hazards and risk. 4. Explain the concept of air, water and soil pollution in relation to human health.						
<b>SPECIFIC OBJECTIVE: 1.0</b> Identify the various types of environment						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Define environment 1.2 Explain the following components of the environment i. Physical (Abiotic) ii. Biological (biotic) iii. Occupational, social-cultural and chemical etc. 1.3 Describe the various component of environment listed in 1.2 above 1.4 Describe the characteristics of the components of environment	Teacher to supervise students classify environment into the following; i. Physical (Abiotic) ii. Biological (biotic) iii. Occupational, Lecture notes Text book Discussion	Lecture notes  Textbooks  Charts  Models				Continuous assessment Examination
<b>SPECIFIC OBJECTIVE: 2.0</b> Enumerate the components of environmental Health in any community						

Specific Learning Objectives (Theory)	Teacher Activities	Learning Resources	Specific Learning Objective (Practical)	Teacher Activities	Learning Resources	Evaluation
2.1 Define Environmental Health 2.2. Explain how environment affect human health. 2.3. Explain each of the components listed in 2.3 above. 2.4 List the components of environmental health: air, water and soil pollution, housing, water supply and sanitation, solid waste management, water related diseases, vector control, environmental epidemiology and toxicology. 2.5. State the components of environmental sanitation; i. Provision of safe and adequate water. ii. Collection and disposal of waste ii. safeguarding of food v. control of insects vectors and other pest v. control of animal reservoir of infection vi. Air hygiene and prevention of atmospheric pollution ii. Elimination of other hazards such noise, radiation etc. 2.6 Explain the relationship between good health and environment.	Teacher to explain to students on indicators used for monitoring of environmental health media (Air, Soil, Water etc. Teacher to state equipment used in solid waste management to students.	Lecture notes  Textbooks  Charts  Models	i. Explain health as a state of dynamic equilibrium. ii. Define and list components of environmental health. iii. Explain waste management methods. iv. Identify equipment for environmental media measurement.	Teacher to explain to students on indicators used in monitoring of environmental health media (Air, Soil, Water etc.   Teacher to state equipment used in solid waste management to students	Lecture notes  Textbooks  Charts  Models	Continuous assessment  Examination
<b>SPECIFIC OBJECTIVE: 3.0</b> Explain the concept of environmental health hazard in a community						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 Explain the term environmental hazard, risk 3.2 classify environmental hazard into; Physical, chemical, biological and socio-cultural (psychosocial)	Teacher to explain to students likely sources of Hazards in any of the Environmental media	-Lecture notes  -Textbooks  -Chart				Continuous assessment  Examination

3.3 State the examples of the four classes of environmental hazards listed in 3.2 above		-Projectors				
3.4 Explain how each of the examples is related to health		-Models				
3.5 Explain how you will control common environmental hazards in your community		-Internet				
<b>SPECIFIC OBJECTIVE: 4.0</b> Explain the concept of air, water, soil pollution in relation to human health						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Define the term; i. Pollution ii. Air pollution iii. Water pollution iv. Soil pollution 4.2 List source of air pollution 4.3 List sources of soil pollution 4.4 List sources of water pollution 4.5 State the relationship between air, water and soil pollution 4.6 State how air, water and soil pollution affects human health and human activity 4.7 State methods of prevention and control of Environmental pollution	Teacher to describe to students remedies available to any type of pollution identified in column 4.3 below  Lectures  Discussion	-Lecture notes  -Textbooks  -Chart  -Projectors  -Models  -Internet				Continuous assessment       Examination
<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: INTRODUCTION TO COMPUTER</b>						
<b>COURSE CODE: COM 111</b>						
<b>DURATION</b>	Lecture: - 15	Tutorial:	Practical: - 30	Total: 45 HRS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to enable students acquire basic knowledge of computer						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:						
1. Explain the meaning of computer 2. Identify components of computer 3. Apply computer skills in daily life						
<b>SPECIFIC OBJECTIVE: 1.0</b> Explain the meaning of computer.						

Specific Learning Objectives (Theory)	Teacher Activities	Learning Resources	Specific Learning Objective (Practical)	Teacher Activities	Learning Resources	Evaluation
1.1 Define computer 1.2 State history of computer 1.3 Explain computer languages 1.4 List and explain the types of computer	Lecture  Discussion	Computer Internet Lecture Note Textbooks	Identify draw and describe different types of computers	Guide and supervise students practical activities	Practical manual Textbooks	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 2.0</b> Identify the components of computer						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 Identify the components of computer and state their functions. 2.2 Explain the link between each component including multi-media functions.	Lecture  Discussion	Computer Internet Lecture Note Textbooks	Identify draw and describe different components of the computer specifying the functions of each components.	Teacher to guide and supervise students practical activities	Computer Internet Textbooks Practical manual	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 3.0</b> Apply computer skills in everyday life.						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 State the various uses of a computer 3.2 Explain use of computer skills in epidemiology 3.3 Explain the application of basic computer programmes in epidemiology for word processing. E.g. MS word, Excel, Power point SPSS minitab EPI info etc.	Lecture  Discussion	Computer  Internet  Lecture Note  Textbooks	Operate the computer using different programmes	Guide and supervise the students practical computer practice	Computer  Internet  Lecture Note  Textbooks	Continuous assessment  Practical Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>				
<b>COURSE TITLE: CITIZENSHIP EDUCATION I</b>				
<b>COURSE CODE: GNS 127</b>				
<b>DURATION</b>	Lecture: - 30HRS	Tutorial: Nil	Practical: - Nil	Total: 30 HRS
<b>CREDIT UNITS: 2</b>				
<b>GOAL:</b> This course is designed to expose the student to the basic concepts, principles and provisions of the Nigerian Constitution				
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:				

1 Explain the principles and objectives of the Nigerian constitution. 2 Explain the federal system of governance in Nigeria 3 Enumerate the fundamental human rights as in the constitution. 4 Explain the concept of citizenship. 5 Know the fundamental objective and directive principles of state policy of Nigeria.						
<b>SPECIFIC OBJECTIVE: 1.0</b> Explain the principles and objectives of the Nigerian constitution						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Explain the term constitution. 1.2 Distinguish the different types of constitutions. 1.3 Explain the supremacy of the Nigerian constitution to other laws. 1.4 Trace the historical development of the Nigerian constitution. 1.5 Explain the concept of “rule of law”	Lecture    Discussion	Projector Text book Internet Lecture notes Charts Pictures				Continuous assessment   Examination
<b>SPECIFIC OBJECTIVE: 2.0</b> Explain the federal system of governance in Nigeria						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Describe the Federal system 2.2 Explain federation as a system of government 2.3 State the objectives of the federal system of governance. 2.4 Examine the evolution, structure and functions of the federal system in Nigeria. 2.5 Analyse the relationships among the three tiers of government in Nigeria. 2.6 Evaluate the revenue allocation formula in operation in Nigeria. 2.7 Compare and contrast other Federations with Nigeria.	Lecture   Discussion	Projector Text book Internet Lecture notes Charts Pictures Tutorials				Continuous assessment   Examination
<b>SPECIFIC OBJECTIVE: 3.0</b> Know the constitutional rights and obligations of Nigerian citizens.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 Examine the significance of rights and obligations in Nigeria. 3.2 Access government’s protection of fundamental rights as contained in the Nigeria Constitution	Lecture  Discussion	Projector Text book Internet Lecture notes Charts Pictures Tutorials				Continuous assessment  Examination

<b>GENERAL OBJECTIVE: 4.0</b> Understand citizenship						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
4.1 Discuss the significance of citizenship. 4.2 Analyse the principles and benefits of citizenship. 4.3 Explain the differences in the modes of acquiring citizenship. 4.4 Evaluate the merits and demerits of each type of citizenships, 4.5 Analyse the basis for the acquisition and withdrawal of Nigerian citizenship. Examine the benefits derivable from Nigerian citizenship.	Lecture   Discussion	Projector Text book Internet Lecture notes Charts Pictures Tutorials				Continuous assessment  Examination
<b>GENERAL OBJECTIVE: 5.0</b> Know the fundamental objectives and directive principles of state policy of Nigeria						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
5.1 State the fundamental obligations of government as provided in the constitution. 5.2 Explain the general provisions of the fundamental objectives and directive principles of state policy. 5.3 Explain the political, economic, social and education policies of Nigeria. 5.4 Explain the directive principles and policy of the Nigerian government on culture, the mass media, national ethics and duties of the citizen. 5.5 Assess the conformity, observance and application of the fundamental objectives and directive principles of state policy by governments and people of Nigeria. 5.6 Recommend improvements on the provisions, conformity, observance and application of the fundamental objectives and directive principles of state policy.		Projector Text book Internet Lecture notes Charts Pictures Tutorials				Test Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>				
<b>COURSE TITLE: GENERAL BIOLOGY</b>				
<b>COURSE CODE: GNS 230</b>				
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS
<b>CREDIT UNITS: 3</b>				

**GOAL:** This course is designed to introduce the students to basic biological sciences and the application of the knowledge in epidemiology

**SPECIFIC OBJECTIVE:** On completion of the course, the student should be able to:

- 1.0 Explain the concept of living things
- 2.0 Describe the structure of cells
- 3.0 Outline the principal features of different groups of living things
- 4.0 Explain the methods by which plants and animals feed themselves (food web).
- 5.0 Explain the methods by which plants and animals generate energy from their food
- 6.0 Describe the methods by which substances are moved in the bodies of plants and animals
- 7.0 Explain how plants and animals remove their waste products
- 8.0 Explain how living things move
- 9.0 Explain how living things increase in size and number
- 10.0 Describe the interaction between organism and its environment
- 11.0 Explain Man's interference with his environment
- 12.0 Explain the fundamentals of inheritance

**SPECIFIC OBJECTIVE: 1.0** Explain the concept of living things

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
1.1 Define Biology 1.2 List living and non-living things in the immediate environment 1.3 List the characteristics of living organisms 1.4 Illustrate the differences between a plant, an animal and a protist e.g. Mango tree plant mycobacterium tuberculosis for protist, Man for animal	i. Trace the origin of the term “Biology”  ii. Discuss the living and non-livings around.	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Group Students into pairs for collection of all common parts of human body, stored product, livestock, house-hold, Field crops	Moderate the group activities	Projector Video/Audio devices Models	Continuous assessment Practical Examination

**SPECIFIC OBJECTIVE: 2.0** Explain the structure of cells.

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 Define cell theory 2.2 Distinguish between prokaryotic and eukaryotic cells 2.5 Differentiate between a plant and animal cell 2.6 List the functions of the different cell organelles.	Provide the equipment and explain the operational mechanism.	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Observe some cells under the microscope (e.g. a plant cell, and animal cell) Draw and label the cells observed in 2.3 above	Moderate the group activities. Guide and supervise the student practicals	Projector Video/Audio devices Models Microscope Drawing materials	Continuous assessment Practical Examination

**SPECIFIC OBJECTIVE: 3.0** Outline the principal features of different groups of living things

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 undertake the classifications of plants and animals to their class levels. 3.2 State the distinguishing characteristic used in the classifications in 3.1 above 3.3 List at least four differences between Algae and Fungi e.g. Chloroplast, autotrophic/heterotrophic, starch/glycogen, presence of chitin in fungi, etc. 3.8 Describe the external structures of a mammal	Emphasis on animals and plants of public health importance	Projector Text book Internet Lecture notes Charts Pictures	Group Students into pairs for collection of all common pests of human body, stored product, livestock, household, Field crops.	Encourage group activities in collection of plant and animal samples	Projector Text book Internet Lecture notes Charts Pictures	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 4.0</b> Explain the feeding methods plants and animals feed themselves						
Specific Learning Objectives (Theory)	Teacher Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
4.1 Define food 4.2 outline the feeding methods in plants animals 4.3 Distinguish between autotrophic and heterotrophic modes of feeding 4.4 Explain the different types of heterotrophy e.g.parasitism, saprophytism 4.5 Explain the different type of autotrophy e.g. photosynthesis, chemosynthesis 4.6 List the stages involved in feeding in animals e.g. ingestion, digestion, assimilation and ingestion 4.7 Describe the digestive system in man	Lecture  Discussions	Projector Text book Internet Lecture notes Charts Pictures	i. The Teacher should guide and supervise students practical ii. Draw and label the digestive system in man	Encourage team work among the students	Projector Video/audio Devices Models Microscopes Hand lens Practical manual Charts Pictures Drawing materials	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 5.0</b> Describe the methods by which plants and animals generate energy from their food						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
5.1 Distinguish between breathing and respiration 5.2 Differentiate between aerobic and anaerobic respiration 5.3 Locate sites of respiration in cells (e.g. Mitochondrion and free Cytoplasm) 5.4 State the economic importance of fermentation (production of alcoholic beverages, lactic acid, and citric acid	Lectures  Discussions	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Demonstrate inhalation, Exhalation in plants and animals.	Guide and supervise practical activities	Projector Video/Audio devices Models	Continuous assessment Practical Examination



5.5 List the respiratory organs in animals (e.g. plasma membrane in protozoa, tracheal system in arthropods, gills in fish and lungs in terrestrial animals)						
<b>SPECIFIC OBJECTIVE 6.0:</b> Describe the methods by which substances are moved in the bodies of plants and animals						
6.1 Define: (a) osmosis (b) diffusion 6.3 Explain the importance of transpiration 6.4 Explain the importance of Translocation 6.5 Describe the vascular system of the plant 6.7 Explain the structure and function of blood	Lecture     discussions	Projector Text book Internet Lecture notes Charts Pictures	Demonstrate Osmosis and Diffusion by simple. Experiments Draw and label the structure of a Mammalian heart	Guide the students practical	Projector Video/Audio devices Models Container Sugar Salt Knife water	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE 7:</b> Explain how plants and animals remove their waste products						
7.1 Define Excretion 7.2 Name the Excretory Organs and Excretory Products in man 7.3 List the structures involved in excretion and the excretory products in plants 7.4 Explain the processes of osmo-regulation in plants and various types of animals.	Lecture    Discussions	Projector Text book Internet Lecture notes Charts Pictures Models	Student to identify excretory organs and their functions.	Provide models for the study.	Projector Video/Audio devices Models	Continuous assessment Practical Examination
<b>GENERAL OBJECTIVE 8:</b> Understand how living things move						
8.1 List the organs of Locomotion in animals (e.g. pseudopodia; cilia, flagella, chetae, jointed limbs etc.) 8.2 Describe the general plan Of the skeleton in mammals 8.3 State the functions of the skeleton 8.4 List the different types of Movements in plants (e.g. tropisms, taxisms, nastic movements etc.)	Lecture   Discussions	Text book Internet Lecture notes Models Chart Pictures Tutorials	Identify the organs and describe the movement pattern.	Make models available for the study.	Models	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE 9:</b> Know how living thing things increase in size and number.						
9.1 Distinguish between asexual and sexual reproduction 9.2 List some examples of asexual reproduction in plants and animals (e.g. binary fission in bacteria, budding in yeast, fragmentation in spirogyra, grafting etc.)	Lecture   Discussions	Text book Internet Lecture notes	Identify organisms that exhibit sexual, asexual reproduction.	Provide models and explain the reproductive Behavior.	Models, Test books Charts	Continuous assessment Practical Examination

9.3 Draw and label some sexual reproductive organs in plants and animals e.g. the flower in plants and male and female reproductive organs in mammals 9.4 List the advantages of asexual and sexual reproduction in plants and animals 9.5 Note the modern advances in plant cultures in in-vitro and in-vivo fertilization (e.g. test tube babies and artificial insemination respectively) 9.6 Describe methods of measuring growth in living things		Charts  Pictures				
<b>GENERAL OBJECTIVE 10:</b> Understand the interaction between an organism and its environment						
10.1 Define the following Terms: (a) Ecology (b) Habitat (c) Community 10.2 Explain the interaction of living things as shown by predation, parasitism, saprophytism, commensalism 10.3 Explain the food Relationship in the community (e.g. food chain, food web, pyramid of numbers etc.) 10.4 List five useful and five harmful microbes 10.5 State the causes and control of the following Diseases: (a) malaria (b) guinea worm (c) bilharzia (d) river blindness 10.6 State the common sources of environmental pollution 10.7 Describe the effects of environmental pollution on living organisms 10.8 List the control measures of environmental pollution described in 10.6 above	i. Explain ecology, habitat, community, predation, parasitism, etc. with examples.  ii. Describe food chain, food web etc.  iii. Discuss disease causation, prevention and control measure e.g. In highlighted diseases.	Text book  Internet  Lecture notes  Charts  Pictures  Models	Group students into pairs for presentation on interaction of living organisms, food relationships and disease causation and control.	Guide students group activities.	-Preserved Insect -Preserved foods -diagram of saprophytism, commensalism etc.	Continuous assessment Practical Examination
<b>GENERAL OBJECTIVE 11:</b> Know Man's interference with his environment						
11.1 Explain the composition and characteristics of a fertile soil 11.2 List the sources of soil erosion 11.3 Give three methods for prevention of soil erosion	Lecture   Discussions	Projector Text book Internet Lecture notes		Guide the students in identifying the soil	Soil Samples  Charts of erosion sites	Continuous assessment Practical Examination

11.4 Explain Man's activities (farming, mining, deforestation, overgrazing, (etc.) that accentuate disasters e.g. desert encroachment, flooding etc. 11.5 Enumerate different Methods by which the deleterious effects can be minimized 11.6 Explain the need for the creation of dams and lakes 11.7 List the disadvantage of man-made lakes		Charts Pictures Tutorials		types, man's harmful activities etc.		
<b>SPECIFIC OBJECTIVE 12:</b> Understand the fundamentals of inheritance						
12.1 Explain the role of chromosomes and genes found in the nucleus of the cell 12.2 Explain the role of gametes in cross fertilization 12.3 Define hybridization, phenotypes and genotypes 12.4 Explain the ABO blood Groupings 12.5 Describe how sex is determined in man 12.6 Explain sex-linked Characters e.g. haemophilia	Lecture     Discussions	Projector Text book Internet Lecture notes Charts Pictures	i Describe the roles of the chromosomes, genes, etc. ii Practice blood grouping / compatibility etc.	Guide students to make group presentations	Projector  Video/Audio devices  Models	Continuous assessment Practical Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: NON-COMMUNICABLE DISEASES</b>						
<b>COURSE CODE: EDC 124</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: -	Total: 30 HRS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> The course is intended to prepare the students with knowledge and skills on the epidemiology of non-communicable diseases.						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to Understand the epidemiology of non-communicable diseases						
1.0 Explain the epidemiology of non-communicable diseases						
2.0 Outline steps in detection and diagnosis of selected non-Communicable Diseases						
3.0 Describe the risk-factors in the epidemiology of non-Communicable Diseases						
4.0 Explain the methods prevention and control of non-Communicable diseases						
<b>SPECIFIC OBJECTIVE: 1.0</b> Explain the epidemiology of non-communicable diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

1.1 Define Terms applicable in NCDs 1.2 Classify NCDs e.g. Cardiovascular diseases, Cancer, Diabetes mellitus, Blindness, Obesity 1.3 Predisposing factors to NCD	Lecture  Discussions	Projector Text book Internet Lecture notes Charts Pictures White board marker Tutorials				Continuous assessment Examination
<b>SPECIFIC OBJECTIVE: 2.0</b> Outline steps in detection and diagnosis of selected non-Communicable Diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 State various Conditions that favors the development of non-communicable diseases 2.3 Outline methods of diagnosing NCDs  2.4 State common signs and symptoms of non-communicable diseases e.g. Hypertension, Diabetes etc	Lecture  Discussion	Projector Text book Internet Lecture notes Charts Pictures Tutorials White board Maker	Student/Teacher should categories pathogenic agents and conditions favouring the development of NCD	Teacher to guide the students in various at the categories	Projector Text book Internet Lecture notes Charts Pictures Tutorials White board Maker	Continuous assessment  Assignment
<b>GENERAL OBJECTIVE: 3.0</b> Understand the risk-factors in the epidemiology of non-Communicable Diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 Explain risk factors of NCDs  3.2 List common types of non-communicable diseases and their characteristics e.g. disability, long latency period, complex etiology  3.3 Identify and explain risk factors of non-communicable diseases	Lecture  Discussion	Projector Text book Internet Lecture notes Charts Pictures Tutorials White board maker				Continuous assessment  Examination
<b>SPECIFIC OBJECTIVE: 4.0</b> Explain the methods of prevention and control of non-Communicable diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

4.1 Explain the term disease prevention, disease control	Lecture	Projector Text book Internet Lecture notes Charts Pictures Tutorials				Continuous assessment
4.2 State types of disease prevention (primary prevention)	Discussion					Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: IMMUNOLOGY IN PUBLIC HEALTH</b>						
<b>COURSE CODE: EDC 125</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS		
<b>CREDIT UNITS: 3</b>						
<b>GOAL:</b> This course is designed to equip the students with the knowledge to understand the role of immunization in public health.						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:						
1. Explain the meaning of immunity, immunization and immunology.						
2. Understand the general nature of immune system.						
3. Understand antigen-antibody and allergic reaction.						
4. Understand the significance of immunology, immunization and public health.						
<b>SPECIFIC OBJECTIVE: 1.0</b> Explain the meaning of immunity, immunization and immunology.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Define the following terms; i. Immunity ii. Immunization iii. Immunology iv. Herd Immunity 1.2 Describe method of acquiring immunity and factors affecting resistance to diseases.	i. Teacher will expose students on how to conduct inoculation.  ii. Teach the students on the concept of Immunity and Immunization	Textbooks Models Lecture note	i. Differentiate between immunity, immunization, immunology ii. Explain herd immunity ii. Outline factors that improve / suppress one's immunity	Teacher will expose students on how to conduct inoculation	Textbooks Models Vaccine vial monitor, bottles, box, immunization cards, charts, OPV bottles	Continuous assessment  Practical  Examination
<b>SPECIFIC OBJECTIVE: 2.0</b> Understand the general nature of immune system.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

Students will be expected to: 2.1 Understand the early concerns of immunology and public health. 2.2 Explain the terms antigen, antibody and other components of the immune system. 2.3 Explain the structure and synthesis of antibodies. 2.4 Explain the terms natural and artificial immunity.	i.Present lectures on early concerns of immunology and public Health ii.Trace the impacts of some discoveries in immunology iii.Analyse antigen-antibody interaction	Textbooks Models Cold box, Vaccine vial monitors, immunization cards, charts	i.Identify the innovations, concerns etc. of immunology and public health ii.Explain natural and artificial immunity etc.	Textbooks Models Cold box, Vaccine vial monitors, immunization cards, charts	Textbooks Models Lecture note	Continuous assessment  Practical  Examination
<b>SPECIFIC OBJECTIVE: 3.0</b> Understand antigen-antibody and allergic reaction.						
Specific Learning Objectives (Theory)	Teacher Activities	Learning Resources	Specific Learning Objective (Practical)	Teacher Activities	Learning Resources	Evaluation
3.1 Explain the various antigen-antibody reactions. 3.2 Explain the various types of hypersensitivity (delayed, immediate, etc.) and allergic reactions. 3.3 Describe the factors affecting antigen-antibody reactions. 3.4 Explain the A, B and O blood grouping (blood and serum) 3.5 Explain the rhesus factor and rhesus incompatibilities. 3.6 Demonstrate any of the reactions in 3.1 above. e.g. agglutination, precipitation, etc.	i.Analyse antigen-antibody reactions  ii.Identify various types of hypersensitivity iii.State the factors affecting antigen-antibody reaction  iv.Explain the compatibility factor in blood grouping	Textbooks  Models  Cold box,  Vaccine vial monitors,  immunization cards, charts	i. Explain the outcome of antigen-antibody reactions, ii. Demonstrate the health implication of allergic reactions, delayed and immediate hypersensitivity reactions iii.Draw the sketch of blood grouping compatibility	i. Guide the students through discussions  ii. Moderate the practical demonstration	Textbooks Models Lecture note	Continuous assessment  Practical  Examination
<b>SPECIFIC OBJECTIVE: 4.0</b> Understand the significance of immunology, immunization and public health						
Specific Learning Objectives (Theory)	Teacher Activities	Learning Resources	Specific Learning Objective (Practical)	Teacher Activities	Learning Resources	Evaluation
4.1 Explain the mechanism of resistance of infection. 4.2 Explain the relationship of infection to immunity. 4.3 Explain the interaction of drugs to immune system.	Teacher to engage students on immunization activities during campaigns e.g. i. Planning ii. Awareness iii. Mobilization	Immunization work plan Charts Vaccination cards	Students to be exposed on how to inject on a human body (Intramuscular (IM) , Subcutaneous and Intravenous (IV))	Teacher to engage students on immunization activities during campaigns	Immunization work plan Charts Vaccination cards	Continuous assessment  Practical  Examination

4.4 List common communicable diseases in Nigeria. e.g. Cholera, HIV/AIDS, Ebola, Lassa fever, etc. 4.5 Explain the immune measures against the diseases in 4.4 above. 4.6 Distinguish between epidemics, endemics, and pandemics, etc. 4.7 Assist in immunization campaign, planning and publicity. 4.8 Assist in immunization assessment and surveillance. 4.9 Describe immunization schedule in Nigeria 4.10 Organize immunization sessions	iv. Vaccination v. Documentation vi. Report writing					
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<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE:</b> Global and Contemporary Health Issues						
<b>COURSE CODE:</b> EDC 126						
<b>DURATION:</b>	Lecture: - 20Hrs	Tutorial: Nil	Practical: - 10Hrs	Total: 30Hrs		
<b>CREDIT UNITS:</b> 2						
<b>GOAL:</b> The course is intended to provide the students with the basic knowledge and skills needed to understand the global nature of health problems and international cooperation, as well as the national and health agencies involved in health care delivery						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Define international/global health and explain the origin as well as the importance of international health.						
2.0 Understand local, national and international health agencies including NGOS and their functions in health care delivery.						
3.0 Understand disease notification and notifiable diseases of international concern.						
4.0 Understand International Health Regulation.						
5.0 Understand Disease Certification Protocols for disease of international concern.						
<b>GENERAL OBJECTIVE: 1.0</b> Define international/global health and explain the origin as well as the importance of international health.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Definition international and global health agencies	Teacher to define International/global/geographic medicine. Teacher should explain the origin of international	Projector Text book Internet Lecture notes Charts	Students should explain International Health/Global Health/Geographic Medicine and explain its	Guide the students in arriving at a concise definition, origin and importance of	Projector Video/Audio devices Models	Test Examination Quiz Oral presentation

1.2 Origins of international and global health 1.3 Importance of international and global health	or global health and its importance to health care.	Pictures White board Marker	origin & importance to health care delivery.	International Health.		
<b>GENERAL OBJECTIVE: 2.0</b> Understand local, national and international health agencies including NGOS and their functions in health care delivery						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Local health agencies and their functions 2.2 National health agencies and their functions - NAFDAC, NESREA, etc. 2.3 International health agencies and their functions: - WHO, UNICEF, DFID, PAHO, etc. 2.4 NGOS and their functions	Guide the students in understanding the agencies fully.  Specify the functions of the agencies to the students	Projector Text book Internet Lecture notes Charts Pictures Tutorials Outings to some of the agencies	Participate in volunteer activities on some local or international agencies	Guide students' conduct while volunteering	Projector Text book Internet Lecture notes Charts Pictures Tutorials Outings to some of the agencies	Test Examination Quiz Presentation (seminar)
<b>GENERAL OBJECTIVE: 3.0</b> Understand disease notification and notifiable diseases of international concern						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 Explain Disease Notification  3.2 List notifiable diseases of international concern	Teacher should explain the diseases of international concern and notification protocols with particular examples to Polio, Covid-19, etc	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Explain Disease Notification and notifiable diseases of international concern	Teacher should explain the diseases of international concern and notification protocols with particular examples to Polio, Covid-19, etc.	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Test Examination Group assignment Presentation
<b>GENERAL OBJECTIVE: 4.0</b> Understand International Health Regulation.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
4.1 Explain International Health Regulation	Teacher should explain International Health Regulation and how it can be used to achieve health in populations.	Text book Internet Lecture notes Tutorials White board/marker	Understand International Health Regulation	The Teacher should discuss the importance of International	Projector Video/Audio devices Notebooks Models White board/marker	Test Examination Excursion reports Group Work



	Relevant International Health Regulation articles should also be explained to the students	Ariports/Seaports Land borders Train Stations Motor Parks, etc			Ariports/Seaports Land borders Train Stations Motor Parks, etc	Activity progress reports and some action pictures
<b>GENERAL OBJECTIVE 5.0</b> Understanding Disease Certification Protocols for disease of international concern						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Explain disease certification protocols for disease of international concern	Teacher should explain the disease certification procedure with particular reference to some of the notifiable diseases like polio, cholera, yellow fever, covid-19, SARS, etc.	Projector Textbook Lecture notes Data evidences Charts White board Marker Internet Tutorials Pictures	Teacher should explain the disease certification procedure with particular reference to some of the notifiable diseases like polio, cholera, yellow fever, covid-19, SARS, etc.	Explain disease certification protocols for disease of international concern	Projector Textbook Lecture notes Data evidences Charts White board Marker Pictures Internet	Test Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN BASIC EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: ACCIDENT PREVENTION AND EMERGENCIES</b>						
<b>COURSE CODE: EDC 127</b>						
<b>CREDIT UNITS: 3</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS		
<b>GOAL:</b> The course is designed to equip prepare the students to be identify and treat minor injuries, make referrals where necessary and carry out environmental health activities in emergencies.						
<b>GENERAL OBJECTIVE:</b>						
1.0 Explain the procedure for identifying the minor injuries						
2.0 Describe treatment procedure for minor injuries.						
3.0 Enumerate steps involved in disaster /emergency preparedness.						
4.0 Describe how to carry out disaster/emergency response operations.						
5.0 Explain the roles of Public Health Professionals and other stakeholders in emergency management.						
<b>SPECIFIC OBJECTIVE:</b> 1.0 <b>Explain</b> the procedure for identifying the common minor ailments						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

1.1 Identify types of minor injuries at community level. E.g. Burns, Fracture etc. 1.2 Identify cases of snake bite, scorpion sting, insect bite, etc.	Lecture  Discussions	Projector White board Text book Marker Internet Lecture notes Charts Pictures				Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE:2.0</b> Describe the treatment procedure of the common minor ailments						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Outline management procedures of injuries	Lecture  Discussions	Projector White board Text book Marker Internet Lecture notes Charts Pictures				Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 3.0</b> Enumerate steps involved in disaster /emergency preparedness.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1. Explain emergency response. 3.2. State the steps involved in an emergency response (aids, shelter, rehabilitation / and reconstruction)	Lecture     Discussion	Projector White board Text book Marker Journals Lecture notes Charts				Continuous assessment Practical Examination
<b>GENERAL OBJECTIVE: 4.0</b> Describe how to carry out disaster/emergency response operation						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
4.1 Define disaster and emergency response operation  4.2 Identify emergency response operations	Lecture	Projector White board Text book Marker Internet				Continuous assessment Practical Examination

4.3 Describe how to carryout emergency response operation	Discussions	Lecture notes Charts Pictures				
<b>SPECIFIC OBJECTIVE: 5.0</b> Understand the role of Public Health Professionals at a recovery stage in disaster management						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
5.1 list environmental health professionals and other stakeholders involved in emergency response 5.2 List the roles of stakeholders Identify disaster situations common in the country e.g. Famine, draught, collapse of building, cattle rustling, hunger, kidnapping etc. 5.3Prepare action plan to address the disaster situations in 5.2 above	Lecture  Discussions	Projector White board Text book Marker Internet Lecture notes Charts Pictures		Teacher should guide the students to act appropriately		Continuous assessment Practical Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: COMMUNICATION IN ENGLISH I</b>						
<b>COURSE CODE: 121</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: -	Total: HRS 30		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to enable the student with the necessary level of competence and proficiency in communication to enable student function effectively in their professional environment.						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Understand registers 2.0 Understand the principles of correspondence 3.0 Know how to apply the principles of writing for publication 4.0 Know how to write a good report.						
<b>GENERAL OBJECTIVE:</b> 1.0 Understand Registers						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

1.1 Explain registers 1.2 Explain factors influencing register, viz. field (profession), mode (speech or writing), tenor (relationship between the interacting parties) 1.3 List some items of register peculiar to different professions 1.4 Identify items of register in a given passage. 1.5 State appropriate uses of jargon	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• White board/Markers</li> <li>• Textbooks.</li> </ul>			Projector Video/Audio devices Models	<ul style="list-style-type: none"> <li>• Assignment</li> <li>• Test</li> <li>• Questionnaire</li> <li>• Quiz</li> <li>• Examination</li> </ul>
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**GENERAL OBJECTIVE: 2.0** Understand the principles of correspondence

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 Describe different types of business letters e.g. applications, enquiries invitations and complaints with their replies. 2.2 Describe types of professional letters e.g. complaints, request, incidence, queries and response etc.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Guide students to write professional letters</li> </ul>	<ul style="list-style-type: none"> <li>• White board/Markers</li> <li>• Textbooks</li> <li>• Samples of professional letters</li> </ul>	2.2 Use suitable language for a specific type of letter 2.3 Write the letters listed in 2.1 and 2.2	<ul style="list-style-type: none"> <li>• Seminar</li> <li>• Guide students to write letters in 2.1 and 2.2</li> </ul>	<ul style="list-style-type: none"> <li>• Samples of letters in 2.1</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment</li> <li>• Test</li> <li>• Questionnaire</li> <li>• Quiz</li> <li>• Examination</li> </ul>

**GENERAL OBJECTIVE: 3.0** Know how to apply the principles of writing for publication

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 Explain techniques of writing for publication	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• White board/Marker</li> <li>• Samples of Textbooks/Journal</li> </ul>	Write essays on topical and current issues Analyze published essays of literary value Evaluate the development of ideas in a given article. Write good articles for publication.	<ul style="list-style-type: none"> <li>• Project work</li> </ul>	<ul style="list-style-type: none"> <li>• Samples of good articles written</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment</li> <li>• Test</li> <li>• Questionnaire</li> <li>• Quiz</li> <li>• Examination</li> </ul>

**GENERAL OBJECTIVE: 4.0** Know how to write a good report

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
4.1 Define a report 4.2 List the types of Reports 4.3 Enumerate uses of reports 4.4 List the characteristics of a good report 4.5 Outline the stages of writing a report	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• White board/Markers</li> <li>• Textbooks/Journals</li> </ul>	4.6 Evaluate a given report 4.7 Write a good report	<ul style="list-style-type: none"> <li>• Class presentation</li> <li>• Guide students to</li> </ul>	<ul style="list-style-type: none"> <li>• Samples of good written articles</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment</li> <li>• Test</li> <li>• Questionnaire</li> <li>• Quiz</li> </ul>

4.6 Discuss the characteristics of a good report				write a report		• Examination
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<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: COMPUTER APPLICATION PACKAGES</b>						
<b>COURSE CODE: COM 121</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: -	Total: HRS 30		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to enable students to know how to use computer packages in Health Information Management.						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1 Know the existing computer packages used in Health Information Management.						
2 Know how to use word processing packages.						
3 Know how to use electronic spread sheets.						
4 Know how to use District Health Information System (DHIS)						
5 Know how to use presentation packages.						
<b>GENERAL OBJECTIVE: 1.0</b> Know the existing packages used in Health Information Management.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Define Application Packages 1.2 State various application packages with examples. 1.3 Explain mode of acquisition of application packages - In-house - Software bureau - Computer hardware manufacturers - Personal development - Lease - Open source e.t.c. 1.4 Explain the criteria for Application packages acceptability. - Good documentation - User-friendliness - Efficiency - Appropriateness e.t.c.	Lecture	-White board/ marker - Multimedia projector			Projector Video/Audio devices Models	-Test -Quiz -Assignment -Examination

<b>GENERAL OBJECTIVE: 2.0 : Know how to use Word Processing packages</b>						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Define Text editor, Word Processor and Word processing packages  2.2 State the uses of word processing  2.3 Explain the features of Microsoft Word Screen	-Lecture	-White board/ marker - Multimedia projector	Type of words Format Text Manipulate Text Demonstrate Paragraph Formatting Format Page Insert Tables Insert graphics in Word processing. Use multiple documents Design styles Templates and Mail merge Proof read and print documents	Guide students to carry out the activities described in the specific objective learning under his supervision		-Test -Quiz -Assignment -Examination
<b>GENERAL OBJECTIVE: 3.0 Know how to use electronic spread sheets.</b>						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 Define spreadsheet  3.2 Describe different types of Spreadsheet packages 3.3 Describe the features of MS Excel <ul style="list-style-type: none"> <li>- Active Cell</li> <li>- The Excel cell referencing system</li> <li>- Entering numbers and text</li> <li>- Default text and number alignment</li> <li>- Adding a column of numbers</li> <li>- Worksheets and Workbooks</li> <li>- Saving a workbook</li> </ul> Closing a workbook <ul style="list-style-type: none"> <li>- Creating a new workbook</li> <li>- Opening a workbook</li> <li>- Switching between workbooks</li> </ul> 3.2 Describe the following techniques involved in starting Excel program           a) Selection techniques <ul style="list-style-type: none"> <li>- Selecting a cell</li> </ul>	-Lecture  -Discussion  -examples	-White board/ marker  - Multimedia projector				Test Examination



Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
4.1 Describe the District Health Information System (DHIS) 4.2 Explain the need for DHIS 4.3 Describe the attributes of DHIS 4.4 Outline the purposes of DHIS 4.5 State the benefits of DHIS	-Lecture	-White board/ marker  -Multimedia projector	Apply DHIS in: - Data entry - Data analysis processing - Preparing reports and other information products.	Guide student to use the software	Computers Internet DHIS Manual	Test Quiz Assignment Examination

**GENERAL OBJECTIVE: 5.0** Know how to use presentation packages.

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
1.1 Explain Presentation packages 1.2 List different presentation packages 1.3 Describe how to start a new Presentation 1.4 Explain the features of MS Power point 1.5 Describe the following techniques involved in MS power point presentation: - To work with slide text - The layout and Look of slides - To insert tables, charts and diagrams - Enhancing slides with graphics - The delivery of a presentation electronically - Customizing Power point. 1.6 Prepare a document for power point presentation adopting steps in 5.5	-Lecture	-White board/ marker  - Multimedia projector		Guide student to prepare a document for power point presentation.	Slides computer	Test Quiz Assignment Examination

**PROGRAMME: NATIONAL DIPLOMA (ND) IN**

**COURSE TITLE: CITIZENSHIP EDUCATION II**

**COURSE CODE: GNS 127**

<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: -	Total: HRS 30
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**CREDIT UNITS: 2**

**GOAL:** The goal of this course is to create awareness and consciousness of political institutions and structures, democratic principles and social values in the mind of the student.

**GENERAL OBJECTIVE:** On completion of the course, the student should be able to:

1. Understand government, political parties and elections.
2. Know the arms of government.
3. Understand constituted authority.
4. Understand national identity



5. Understand national ethics and discipline in nation life
6. Know some methods of environmental protection

**GENERAL OBJECTIVE: 1.0** Understand government, political parties and elections.

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
1.1 Explain the need for government. 1.2 Describe the various systems of government. 1.3 Examine the various forms of government. 1.4 Outline the functions of government. 1.5 Examine the various processes of an election. 1.6 Assess the role and importance of political parties in an election. 1.7 Evaluate the functions of other agencies in an election. 1.8 Discuss the need for a free and fair election.	Lecture      Discussions	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Recall the current registered political parties in the Country	Engage students on the roles and function of INEC in conducting elections	Projector Video/Audio devices Models	Quiz Test Assignment

**GENERAL OBJECTIVE: 2.0** Know the arms of government

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 Analyse the functions of the Legislature, the Executive and the Judiciary at Federal, State and Local Government levels.	Discuss various arms of government, separation of power, functions, checks and balances	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Demonstrate the roles of each arm in public Health development	Guide students activities	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Quiz
2.2 Examine the relationships among the three arms of government						Test
2.3 Explain the principles of "Separation of Power" and "checks and balance" in government.						Assignment
2.4 Explain the processes of election/appointment and removal of the Executive at the three levels of government.						
2.5 Examine the main components of the Nigerian judicial system and its independence.						
2.6 Evaluate the components of the code of conduct for public officers.						
2.7 Assess the effectiveness of the Executive in the management of public funds.						
2.8 Assess the performance of the mass media in Nigeria						

**GENERAL OBJECTIVE: 3.0** Understand constituted authority

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 Explain the term Constituted Authority. 3.2 Distinguish between the types of constituted authority 3.3 Examine bureaucracy, its characteristics, advantages and disadvantages. 3.4 Examine different forms of delegated authority in a modern state. 3.5 Distinguish between the terms "Power' and Authority. 3.6 State the forms and effects of abuse of power. 3.7 Prescribe remedies for abuse of power. 3.8 Distinguish between "Leadership" and "Followership". 3.9 Evaluate the roles of leaders and followers in nation building, 3.10 Examine the qualities of good leaders and followers.	Lectures  Discussions  Role Playing	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Identify constituted authorities in communities, LGA, States etc and also in public health profession	Demonstrate delegation of authorities	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Quiz Test Assignment
<b>GENERAL OBJECTIVE: 4.0</b> Understand national identity						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
4.1 Explain the need for and ways of preserving national identity. 4.2 Examine the role and significance of national symbols. 4.3 Discuss the contributions of selected heroes and heroines towards the development of Nigeria. 4.4 State similarities and differences of various aspects of culture in Nigeria 4.5 Examine the role of culture in national integration	Lectures  Discussion	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Outline national identities, symbols and explain the significance	Pick some National identities and discuss		Quiz Test Assignment Examination
<b>GENERAL OBJECTIVE: 5.0</b> Understand national ethics and discipline in nation life						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation

5.1 Explain the need for national ethics	Discuss ethics and value system in terms of working environment, culture, mutual respect for one another	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Explain the need for national ethics, consequences of indiscipline need to protect public property e.g. power cables, water facilities, museums and monuments.	Task the students to recite the national anthem and pledges	Projector Text book Internet Lecture notes Charts Pictures Tutorials	Quiz Test Assignment
5.2 Relate various aspects of national ethics to national development.						
5.3 Discuss the causes and consequences of indiscipline in the nation.						
5.4 Evaluate the methods used by public agencies in the control of indiscipline.						
5.5 Discuss how citizens can participate in the control of indiscipline.						
5.6 Discuss the need to maintain the right attitudes towards public property.						
GENERAL OBJECTIVE: 6.0 Know some methods of environmental protection.						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
6.1 Explain the concept of environment. 6.2 Analyse the components of the Nigerian environment. 6.3 Explain the impact of the environment on human development. 6.4 Suggest ways of reducing over exploitation of the environment. 6.5 Discuss the different forms, causes and effects of pollution on the environment. 6.6 Evaluate the different methods of controlling pollution. 6.7 Examine the different methods used for the conservation of the environment. 6.8 Assess the effectiveness of national and international conservation agencies.	Lecture  Discussion	Projector Text book Internet Lecture notes Charts Pictures	Identify ways of protecting the Environment from over-exploitation  Explain Environment as a resource	Engage student to list the causes and effects of pollution on the Environment	Projector Text book Internet Lecture notes Charts Pictures	Quiz Test Assignment

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>				
<b>COURSE TITLE: INTRODUCTION TO ENTREPRENEURSHIP</b>				
<b>COURSE CODE: EED 216</b>				
<b>DURATION</b>	Lecture: - 15	Tutorial:	Practical: - 15	Total: 30 HRS
<b>CREDIT UNITS: 2</b>				

<b>GOAL:</b> This course is designed to enable students to develop an entrepreneurial mindset and awareness.						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1 Understand the meaning and scope of Enterprise and Entrepreneurship 2 Understand the history and Government Policy measures at promoting Entrepreneurship in Nigeria 3 Understand the types, characteristics and rationale of Entrepreneurship 4 Understand the role of Entrepreneurship in economic development 5 Understand Entrepreneurial characteristics and attitude 6 Understand the key competencies and determining factors for success in Entrepreneurship 7 Know the motivational pattern of Entrepreneurs.						
<b>GENERAL OBJECTIVE: 1.0</b> Understand the meaning and scope of Enterprise and Entrepreneurship						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
1.1 Define an Enterprise in its narrower and wider contexts. 1.2 Explain different forms of Enterprises 1.3 Classify the different forms of Enterprises into small, medium and large enterprises 1.4 Explain the terms: Entrepreneur, Entrepreneurship, Wage Employment, and self-employment, explain clearly the business terrain in Nigeria.	i. Explain the terms: Enterprise, Entrepreneur Entrepreneurship ii. List the different types of enterprises and group them into small, medium and large enterprise iii. Compare and contrast wage employment and self-employment. iv. Explain clearly the business terrain in Nigeria.	Text Books	1.1 Identify features of the types of enterprises identified 1.2 Identify the facilities and opportunities available for self-employment. 1.3 Identify successful entrepreneurs in Nigeria. 1.4 Evaluate the role of entrepreneurship in wealth creation.	Guide students to research into different forms of enterprises. Guide students to research and identify criteria for successful entrepreneurship. Establish competitive groups. Students to make formal presentations of their findings. Students to undertake enquiry learning on selected entrepreneur and enterprise.	Successful Entrepreneur to speak on the role and importance of Entrepreneurship.  Use of internet and relevant video clips.	Quiz Test Assignment
<b>GENERAL OBJECTIVE: 2.0</b> Understand the history and Government Policy measures at promoting Entrepreneurship in Nigeria						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 Trace the evolution of entrepreneurship development. 2.2 Compare Entrepreneurship in	i. Explain the historical development and role of entrepreneurship in the development of enterprises in Nigeria.	Text Books Journals Publications Video Film TV & VCR	Obtain the required information from the net.	Guide students to search the web for historical evolution of entrepreneurship in other parts of the world.	Internet.	Quiz Test Assignment

<p>Nigeria with Japan, India, China, Malaysia, South Korea, etc</p> <p>2.3 Explain Nigeria's values in relation to Entrepreneurship.</p> <p>2.4 Describe the role of Entrepreneurship In the development of enterprises.</p>	<p>ii. Compare Entrepreneurship in Nigeria with other countries of the world. Japan, India, China, Malaysia, South Korea.</p> <p>iii. Show students video film on Entrepreneurship development in any of the countries mentioned above.</p> <p>iv. Explain Nigeria's values and Entrepreneurship.</p>			<p>Research and list various Government Measures on SME's and Industrial Development from 1960 to date.</p>		
<b>GENERAL OBJECTIVE: 3.0</b> Understand the types, characteristics and rationale of Entrepreneurship						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
<p>3.1 Explain types of Entrepreneurs and their characteristics.</p> <p>3.2 Compare and contrast Technological and Social Entrepreneurship.</p> <p>3.3 Identify the different types of Entrepreneurs: self-employed, opportunistic, Inventors, Pattern multipliers etc.</p> <p>3.4 Identify the role of Entrepreneurship in business, society and in self-employment.</p>	<p>i. Explain types of Entrepreneurs.</p> <p>ii. Explain types of Entrepreneurship.</p> <p>iii. Explain features of Entrepreneurship in business.</p> <p>iv. Explain the rewards and efforts Entrepreneurship in business.</p> <p>v. Describe the different types of Entrepreneurs</p> <p>vi. Describe the role of entrepreneurship in business, society employment generation and wealth creation.</p> <p>vii. Explain the benefits of self-employment.</p>	<p>Text Books.</p> <p>K.A.B.</p> <p>Journals</p> <p>Publications</p> <p>Video Film</p> <p>TV &amp; VCR</p>	<p>Analyze life situations people may find themselves in.</p> <p>Enumerate the benefits to be derived from the above situation.</p>	<p>Guide students to identify opportunities from the environment.</p>	<p>Internet.</p> <p>Textbooks</p> <p>Journals</p>	<p>Quiz</p> <p>Test</p> <p>Assignment</p>
<b>GENERAL OBJECTIVE: 4.0</b> Understand the role of Entrepreneurship in economic development						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
<p>4.1 Identify resource and constraints of Entrepreneurship.</p>	<p>i. Explain resources and constraints of Entrepreneur.</p>	<p>Text Books.</p> <p>Journals</p> <p>Publications</p> <p>Video Film</p>	<p>Classify the resources into economic, human, knowledge and time.</p>	<p>Show transparency of resources needed</p>	<p>Computer or Overhead Projector</p> <p>SME's</p>	<p>Quiz</p> <p>Test</p> <p>Assignment</p>

4.2 Explain how Entrepreneurship leads to import substitution and utilization of local resources.	ii. Relate import substitution to utilization of local resources.	TV & VCR	Distinguish between economic development and growth.	by an entrepreneur. Guide students to visit selected enterprise/community projects. Guide students on the use of local raw materials for value addition.		
4.3 Explain how Entrepreneurship leads to socio-economic development.	iii. Explain equitable distribution of industries and the role of entrepreneurship.					
4.4 Explain the role of an entrepreneur in grassroots/local economic development.	iv. Explain how entrepreneurship leads to job creation.					

**GENERAL OBJECTIVE: 5.0** Understand Entrepreneurial characteristics and attitude

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Learning Resources	Evaluation
5.1 Explain the philosophy, values, scope, need and characteristic of Entrepreneurship. 5.2 Explain the profiles of local Entrepreneurs. 5.3 Demonstrate high sense of innovation, creativity and independence 5.4 Explain the process of acquiring high sense of information seeking and ability in operating an enterprise. 5.5 Identify various risks and remedies involved in operating an enterprise. 5.6 Evaluate pilot project considering resources, time, personnel, equipment, money, materials etc. 5.7 Demonstrate leadership and leadership skills by mobilizing	i. Using slide or PowerPoint explain personal characteristics and attitude of an Entrepreneur ii. List Entrepreneurial traits citing relevant cases. iii. Explain the aspiration, determination and efficiency of an Entrepreneur. iv. Explain how to demonstrate high sense of innovation creativity and independence. v. Describe how to evaluate a private project. vi. Describe how to mobilize resources for	Textbooks Journals Computer Projector	Evaluate the opportunities identifying corresponding self-employment opportunities.  Evaluate a project considering its resources: management of time, personnel, equipment and money.  Explain constraints and problem solving techniques.	Guide students to identify as many job/employment opportunities as possible. Guide students to visit a successful enterprise, and evaluate its resources to identify its contribution to economy, its internal and external constraints and available problem solving techniques. Group students to survey and interview Entrepreneurs. Evaluate a sample project with the students, then give	Computer Projector Guest Speakers (Female/Male) Internet search.	Quiz Test Assignment

resources for establishing an enterprise. 5.8 Demonstrate high level problem solving techniques in overcoming internal and external constraints.	establishing an enterprise. vii. Describe how to solve problems involving internal and external constraints.			them assignment to assess one.		
<b>GENERAL OBJECTIVE: 6.0</b> Understand the key competencies and determining factors for success in Entrepreneurship						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective	Teachers Activities	Learning Resources	Evaluation
6.1 Identify the key competencies required in setting up a successful small business; knowledge, skill and Traits. 6.2 Identify key success factors in setting a small business: Resources, Ability, Motivation and Determination, Idea and Market etc. 6.3 Define individual life goal and link it to Entrepreneurship. 6.4 Identify the strengths and weaknesses in 6.3 above. 6.5 Explain business games. 6.6 Explain the behavioral pattern observed in 6.5 above on: Moderate risk taking, goal setting, Learning from feedback. Taking personal responsibility. Confidence and self- reliance.	i. Explain major competencies required for successful Entrepreneurship ii. Explain key success factors in setting up small business. iii. Explain individual life goal of an Entrepreneur iv. Explain relevant business games and their behavioral patterns.	Text Books. Journals Publications Video Film TV & VCR	Describe: Data collection about self, who am I (personal efficacy). Rating of concept, self-knowledge. Play a relevant business game and observe the behavioral pattern in relation to moderate risk taking, goal setting etc.  Identify core skills, competencies, and success factors required for entrepreneurship.	Guide students to demonstrate knowledge of themselves, goals, Entrepreneurship strengths and weaknesses.  Give practical assignment to students on personal efficacy, goal and link to Entrepreneurship strength and weaknesses. Demonstrate how to play business game. Visit a small business enterprise.	Computer and accessories, internet and visitations. Blocks Rings Papers	Quiz Test Assignment

<b>GENERAL OBJECTIVE: 7.0</b> Know the motivational pattern of Entrepreneurs.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
7.1 Define motivation. 7.2 List the objectives of motivation. 7.3 Identify barriers to motivation and achievement. 7.4 Explain Thematic Appreciation Test (TAT) scores. 7.5 Explain how to analyze motive strength from TAT score 7.6 Explain the spirit of Achievement Motivation Test (AMT)	i. Explain motivation, objectives, merit and demerit. ii. Explain TAT scores. iii. Explain how to carryout analysis on motive strength from TAT scores. iv. Explain spirit of AMT.	Text Books Journals Publications	Analyze motive strength from TAT score using a given case.	Illustrate how to carryout analysis on motive strength from TAT scores using related case studies.	Computer and Internet facilities	Quiz Test Assignment

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>							
<b>COURSE TITLE: APPLIED PHYSICS</b>							
<b>COURSE CODE: EHS 111</b>							
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS			
<b>CREDIT UNITS: 3</b>							
<b>GOAL:</b> This course is designed to provide students with basic knowledge of physics applicable to Environmental Health epidemiology							
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:							
1.0 Understand the concepts and principles of physics and their applications to Environmental Health Epidemiology.							
2.0 Understand molecular phenomena and their applications to Environmental Health Epidemiology.							
3.0 Understand specific principles of heat energy in health care interventions							
4.0 Understand the nature of radioactivity in relation to health care, communication and power generation.							
5.0 Understand principles of optics and light waves in application to health care							
6.0 Know the various measurements and units relevant in Environmental Health Epidemiology and disease control							
7.0 Understand the concepts and principles of elasticity and their application to Environmental Health Epidemiology and disease control							
8.0 Know basic machines used in healthcare practice							
9.0 Know the principles of force(s) and their applications to Environmental Health Epidemiology and disease control							
<b>GENERAL OBJECTIVE: 1.0</b> Understand the concepts and principles of physics and their applications to EHT							
<b>Specific Learning Objectives (Theory)</b>		<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>



1.1 Define the following Terms: - Science - Physics 1.2 Enumerate the branches of science and their relevance to Environmental Health epidemiology and disease control 1.3 List the branches of physics and their relevance to Epidemiology and disease control.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Text books</li> <li>• White board / Markers</li> <li>• Charts</li> <li>• Multimedia projector/</li> </ul>			Projector Video/Audio devices Models	<ul style="list-style-type: none"> <li>• Test</li> <li>• Examination</li> </ul>
<b>GENERAL OBJECTIVE: 2.0</b> Understand molecular phenomena and their applications to Epidemiology and disease control						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Define the following: - Atom - Molecule - Matter 2.2 State common examples of molecular phenomenon 2.3 Describe the states of matter 2.4 Explain the concept of the following: - Surface tension - Osmosis - Capillarity - Active Transport - Diffusion 2.5 Discuss the application of the following to EHT - Surface tension - Osmosis - Capillarity - Active Transport - Diffusion	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Chart,</li> <li>• Films</li> <li>• White board/ Markers</li> <li>• Multimedia projector/ Laptops</li> </ul>	2.5 Demonstrate the application of the following to Epidemiology and disease control practice: Surface tension Osmosis Active transport Capillarity Diffusion	Demonstrate and Assist students to carry out the activity	<ul style="list-style-type: none"> <li>• Beaker (glass)</li> <li>• Water and soap</li> <li>• Mercury</li> <li>• Capillary tube</li> </ul>	Assignment Test Examination
<b>GENERAL OBJECTIVE: 3.0</b> Understand specific principles of heat energy in health care interventions.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

3.1 Define heat and energy 3.2 Enumerate the sources of Heat Energy 3.3 Explain the various methods of providing heat for the body 3.4 Define Temperature 3.5 List types of thermometer and their uses 3.6 Describe heat conversion 3.7 Define calories 3.8 State the caloric values of the following: <ul style="list-style-type: none"> <li>- Adult food</li> <li>- Baby food</li> <li>- Vegetarian diet</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	Thermometer Charts Films Books White board / Markers	Demonstrate the various methods in providing heat for the body  Demonstrate measurement of temperature of Human body, fluid and Air	Demonstrate and assist students to measure the temperature of human body, fluid, air	Hot water bottle  Thermometer Hydrometer Barometer	Assignment Test Examination
<b>GENERAL OBJECTIVE: 4.0</b> Understand the nature of radioactivity in relation to health care, communication and power generation.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
4.1 Define the following terms: <ul style="list-style-type: none"> <li>- Electricity</li> <li>- Magnetism</li> </ul> 4.2 Explain the basic principles of the following: <ul style="list-style-type: none"> <li>- Electricity</li> <li>- Magnetism</li> </ul> 4.3 State the properties of magnet 4.4 Explain Electromagnetism 4.5 Discuss x-ray under the following: <ul style="list-style-type: none"> <li>- Prediction</li> <li>- Properties and nature (in healthcare)</li> </ul> 4.6 State the precautionary measures in radiological procedures	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Charts</li> <li>• Films</li> <li>• Text Books</li> <li>• White board/Marker</li> <li>• Multimedia projector/Screen</li> </ul>	Demonstrate magnetism and its application to health Demonstrate application of the following radiological instruments: <ul style="list-style-type: none"> <li>- Computed Tomography (CT) Scan</li> <li>- Ultrasound</li> <li>- Magnetic Resonance Imaging (MRI)</li> </ul>	Demonstrate and assist students perform magnetism process  Demonstrate and assist students with activities in	Magnetic metals Non-magnetic substances  C.T Scan MRI Ultrasound	Assignment Test Examination
<b>GENERAL OBJECTIVE: 5.0</b> Understand principles of optics and light waves in application to health care						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
5.1 Define the following: <ul style="list-style-type: none"> <li>- Optics</li> <li>- Waves</li> </ul> 5.2 List types of Waves	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Books</li> <li>• Samples of Lenses etc.</li> <li>• Multimedia projector/</li> </ul>	Demonstrate light application on Simple lenses Human eye Microscope Common eye defect	Demonstrate and assist students apply light as in 5.9.	<ul style="list-style-type: none"> <li>• Sources of light e.g. Torch light</li> <li>• Microscope</li> <li>• Eye clinics</li> </ul>	Assignment Test Examination

5.3 Explain the basic principles in the propagation of sound waves 5.4 Define light energy 5.5 Discuss properties of light 5.6 List sources of light energy 5.7 Explain the following: - Propagation of light - Transmission of light - Reflection of light - Dispersion of light 5.8 Discuss lenses 5.9 Explain reflection of light through lenses 5.10 Explain light application on: - Simple lenses - Human eye - Microscope - Common eye defect - Corrective mechanism		Laptops		Organize visit to X-ray or Medical Imaging department or institution. Carry out visit to eye clinic		
<b>GENERAL OBJECTIVE: 6.0</b> Know the various measurements and units relevant to Epidemiology and disease control.						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
6.1 Enumerate types of measurement commonly carried out by public health professionals 6.2 Explain Standard International Unit (SI Unit) 6.3 Identify the various SI Units and their related English unit conversions 6.4 Explain the conversion of the unit(s) identified in 6.5 Explain the following measuring instruments and their uses: - Barometer - Sphygmomanometer	• Lecture • Discussion	Text Books  Measuring Instruments i.e. sphygmomanometer, urinometer, fluid hydrometer, and barometer.  White board/ marker	Demonstrate the following: - pressure measurement - use of urinometer - use of hydrometer. Demonstrate application of the following: - Pascal's Law - in a water mattress - Boyle's law in a sterilizer - Buoyancy and	Demonstrate and assist students to: - Measure pressure - Use urinometer - Use hydrometer  Demonstrate and assist students in carrying out activities.	• Barometer • Sphygmomanometer • Urinometer • Urine • Water • Hydrometer • Test tube, mattress  • Water • Sterilizer • Cerebro Spinal Fluid (CSF) • Amniotic fluid	Assignment Test Examination

<ul style="list-style-type: none"> <li>- Hydrometer</li> <li>- Urinometer</li> <li>- Fluid hydrometer</li> </ul> <p>6.6 Explain the following:</p> <ul style="list-style-type: none"> <li>- Characteristics of pressure in fluid</li> <li>- Specific gravity</li> </ul> <p>6.7 Discuss the following and their applications to Epidemiology</p> <ul style="list-style-type: none"> <li>- Pascal's law</li> <li>- Boyle's law</li> <li>- Buoyancy and Archimede's principles</li> <li>- Viscosity</li> </ul>			<p>Archimedes law in cerebrospinal fluid (CSF), Amniotic fluid etc.</p> <ul style="list-style-type: none"> <li>- Viscosity of Fluid, Blood in the capillary tubes</li> </ul>		<ul style="list-style-type: none"> <li>• Blood specimen</li> <li>• Capillary tubes</li> </ul>	
<b>GENERAL OBJECTIVE: 7.0</b> Understand the concepts and principles of elasticity and their application in Epidemiology and disease control						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
<p>7.1 Define elasticity</p> <p>7.2 Explain stress and strain</p> <p>7.3 Enumerate and discuss types of stress</p> <p>7.4 Define the following:</p> <ul style="list-style-type: none"> <li>- Hook's law</li> <li>- Young's modulus</li> <li>- Bulk's modulus</li> <li>- Shear's modulus</li> </ul> <p>7.5 Describe the applications of the following:</p> <ul style="list-style-type: none"> <li>• Blood vessels</li> <li>• Spring balance</li> <li>• Shearing force in decubitus ulcer</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Multimedia presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Books</li> <li>• Anatomical models i.e. blood vessels, arteries, veins etc.</li> <li>• Multimedia projector/ Laptops</li> </ul>	<p>Explain elasticity stress and strain in relevant Epidemiology and disease control</p>	<p>Guide students in application of 7.4 to 7.5</p>	<ul style="list-style-type: none"> <li>•Barometer</li> <li>•Sphygmomanometer</li> <li>•Urinometer</li> <li>•Urine</li> <li>•Water</li> <li>•Hydrometer</li> <li>•Test tube, mattress</li> <li>•Water</li> <li>•Sterilizer</li> <li>•Cerebro Spinal Fluid (CSF)</li> <li>•Amniotic fluid</li> <li>•Blood specimen</li> <li>•Capillary tubes</li> </ul>	<p>Assignment</p> <p>Test</p> <p>Examination</p>
<b>GENERAL OBJECTIVE: 8.0</b> Know the basic machines used in health care practice						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation

8.1 Define machine 8.2 Enumerate types of machine used in health care 8.3 Explain the applications of lever and pulleys in Environmental Health Epidemiology	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Books</li> <li>• Charts</li> <li>• Samples of Pulleys and Levers</li> </ul>	Classify and give examples of - Levers - Pulleys Demonstrate the application of levers and pulleys	Demonstrate classification of levers / pulleys	<ul style="list-style-type: none"> <li>• Levers</li> <li>• Pulleys</li> <li>• sand bags</li> </ul>	Assignment Test Examination
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**General Objective: 9.0** Know the principles of force(s) and their application to Epidemiology and disease control.

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
9.1 Define the following: - Force - Work - Energy - Power 9.2 Explain the principles and relevance of the following to Epidemiology and disease control - Force - Work - Energy - Power	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Text books</li> <li>• White Board/ Marker</li> <li>• Multimedia projector/ Laptops</li> </ul>	Differentiate force, work and energy	Demonstrate the application of force for work		Assignment Test Examination

**PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL**

**COURSE TITLE: APPLIED CHEMISTRY**

**COURSE CODE: EHS 112**

<b>DURATION</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS
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**CREDIT UNITS: 3**

**GOAL:** This course is designed to provide the students with basic knowledge of chemistry and its application in Epidemiology and disease control

**GENERAL OBJECTIVE:** On completion of the course, the student should be able to:

- 1.0 Understand the concepts and the principles of Chemistry and its importance to epidemiology and disease control.
- 2.0 Understand the nature of matter.
- 3.0 Know acids, bases, salts and their characteristics.
- 4.0 Understand electrolytes/electrolysis.
- 5.0 Understand the application of knowledge of carbon and hydrocarbon compounds to epidemiology and disease control.
- 6.0 Know the classification and structure of organic and inorganic compounds and their application on epidemiology and disease control.
- 7.0 Understand atomic structure and nuclear energy.

**GENERAL OBJECTIVE: 1.0** Understand the concepts, principles of chemistry and its importance to epidemiology and disease control

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
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1.1 Define Science, Chemistry 1.2 List branches of Chemistry and their relevance to epidemiology and disease control. 1.3 Explain the nature and importance of chemistry to Epidemiology to and disease control	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Text books</li> <li>• White Board/Marker</li> <li>• Multimedia projector/ Laptops</li> </ul>	State the definitions, branches, relevant and nature of chemistry	Monitor students class activities	Projector Video/Audio devices Models	Assignment Test Examination
<b>GENERAL OBJECTIVE: 2.0</b> Understand Nature of Matter						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Describe Physical and chemical properties of matter 2.2 Describe physical and chemical changes in the body. 2.3 Explain the chemical symbols of elements. 2.4 Describe classification of elements, compounds and mixtures. 2.5 Discuss particulate nature of matter: - Atoms - Molecules - Ions 2.6 Explain structure and chemical combinations	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Charts</li> <li>• White Board/Marker</li> <li>• Packages containing materials on nature of matter</li> <li>• Textbooks</li> <li>• Multimedia projectors</li> <li>• Computers.</li> </ul>	Demonstrate Physical and chemical change using substances like water and air Demonstrate separation of mixtures e.g. blood, air and their application Use simple formulae and equations Apply symbols, formulae of elements and components	Demonstrate and assist students perform activities on 2.1, 2.4, 2.5, 2.6	Water Bunsen burner Flask Whole blood Air Spinning machine Test tube Centrifuge Acid compound Base compound Litmus papers	Assignment Test Examination
<b>GENERAL OBJECTIVE: 3.0</b> Know acids, bases, salts and their characteristics						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

3.1 Define the following: acids, bases and salts 3.2 Discuss properties and uses of acids, bases and salts. 3.3 Discuss types of salts and their uses. 3.4 Describe efflorescent, deliquescent 3.5 List examples of properties of metals and non- metals. 3.6 Discuss hydrolysis of salts. 3.7 Discuss titration acid and base 3.8 Discuss simple volumetric analysis	Lecture  Discussion	<ul style="list-style-type: none"> <li>Samples of compounds i.e. Acids, Base, Salts etc.</li> <li>Acid</li> <li>Base</li> <li>Pipettes/ Beakers</li> </ul>	Measure the acidity and alkalinity of acid and base compounds.  Demonstrate hydrolysis of salts. Titrate acid and base 3.8 Perform simple volumetric analysis	Demonstrate and assist students perform activity on  3.6 Demonstrate and assist students perform activity on 3.7, 3.8 and 3.9  Demonstration	<ul style="list-style-type: none"> <li>Water</li> <li>Bunsen burner</li> <li>Flask</li> <li>Acid compound</li> <li>Base compound</li> <li>Litmus papers</li> <li>Water</li> <li>Bunsen burner</li> <li>Flask</li> <li>Acid compound</li> <li>Base compound</li> <li>Litmus papers</li> </ul>	Assignment Test Examination
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**GENERAL OBJECTIVE: 4.0** Understand Electrolysis /Electrolytes

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
4.1 Define the following - Electrolytes - Non-electrolytes - Electrolysis 4.2 Describe ionic theory and ionization 4.3 Describe electrolytes/non-electrolytes 4.4 Explain Electrolysis 4.5 Enumerate the composition of air 4.6 Explain air pollution and purification 4.7 Explain water pollution and purification	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Demonstrate electrolysis and guide student to do return demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Multimedia projector/Laptops</li> </ul>	Demonstrate electrolysis and guide students to return demonstration	Guide students demonstration	<ul style="list-style-type: none"> <li>Water</li> <li>Bunsen burner</li> <li>Flask</li> <li>Acid compound</li> <li>Base compound</li> <li>Litmus papers</li> <li>Water</li> <li>Bunsen burner</li> <li>Flask</li> <li>Acid compound</li> <li>Base compound</li> <li>Litmus papers</li> </ul>	<i>Quiz Test Examination</i>

**GENERAL OBJECTIVE: 5.0** Understand the application of knowledge of carbon and hydrocarbon compounds to Epidemiology and disease control.

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
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5.1 Define Carbons 5.2. List the properties of elements 5.3. Describe hydrocarbons (saturated and unsaturated) 5.4. Discuss the following functional group chemistry - Alcohol - Amines - Carbonyls - Carboxylic acid etc.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	Sample of : <ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Amino</li> <li>• Carbon</li> <li>• Acids</li> <li>• Multimedia projector</li> </ul>			<ul style="list-style-type: none"> <li>• Water</li> <li>• Bunsen burner</li> <li>• Flask</li> <li>• Acid compound</li> <li>• Base compound</li> <li>• Litmus papers</li> <li>• Water</li> <li>• Bunsen burner</li> <li>• Flask</li> <li>• Acid compound</li> <li>• Base compound</li> <li>• Litmus papers</li> </ul>	<i>Quiz Test Examination</i>
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**GENERAL OBJECTIVE: 6.0** Know the classification and structure of organic and inorganic compounds and their application on Health *practic*

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
6.1 Define and Classify the following: - Organic compounds - Inorganic compounds 6.2 Enumerate examples of oxidation products of alcohol. 6.3. State examples and uses of aldehydes in Epidemiology and disease control 6.4. Describe the Chemical Compounds of the following:- - Carbohydrates - Proteins - Fatty acids - Lipids 6.5. State the biological importance of some organic and inorganic substances. 6.6 Draw the biochemical structures of organic and in-organic compounds and list examples.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Sketch out examples of the structures for the students to observe.</li> </ul>	<ul style="list-style-type: none"> <li>• White board/Marker</li> <li>• Textbooks</li> <li>• Charts</li> <li>• Multimedia Projector /Laptops</li> <li>• Card board paper</li> <li>• Card board paper</li> <li>• Multimedia projector</li> <li>• Markers</li> </ul>			<ul style="list-style-type: none"> <li>• Water</li> <li>• Bunsen burner</li> <li>• Flask</li> <li>• Acid compound</li> <li>• Base compound</li> <li>• Litmus papers</li> <li>• Water</li> <li>• Bunsen burner</li> <li>• Flask</li> <li>• Acid compound</li> <li>• Base compound</li> <li>• Litmus papers</li> </ul>	Quiz Test Examination

**GENERAL OBJECTIVE: 7.0** Understand atomic structure and nuclear energy



Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
7.1. Discuss natural and artificial radio-activity 7.2. List radioactive elements 7.3 Discuss types of radiations from radioactive elements e.g. alpha, beta, and gamma. 7.4 Explain nuclear structure and radioactive decay 7.5 Explain the following:- - Radio-isotopes - nuclear reaction - nuclear energy e.g. nuclear fusion 7.7 Identify health hazards from radioactive substance 7.8 State precautionary measures taken against biochemical and radioactive substances used in the Health Care System.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Sample of substance with radio- active elements</li> <li>• Multimedia projector/Laptops</li> </ul>	Relate the study to health care institutions and outline precautionary measures against the radioactive substances		<ul style="list-style-type: none"> <li>• Water</li> <li>• Bunsen burner</li> <li>• Flask</li> <li>• Acid compound</li> <li>• Base compound</li> <li>• Litmus papers</li> <li>• Water</li> <li>• Bunsen burner</li> <li>• Flask</li> <li>• Acid compound</li> <li>• Base compound</li> <li>• Litmus papers</li> </ul>	Quiz Test Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: COMMUNICABLE DISEASES II</b>						
<b>COURSE CODE: CHO 222</b>						
<b>DURATION:</b>	Lecture: - 15 HOURS	Tutorial:	Practical: - 15 HOURS	Total: 30 HOURS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to acquaint with the knowledge of communicable diseases, their control and prevention						
<b>GENERAL OBJECTIVES:</b> On completion of the course, the student should be able to:						
1.0 Know common insect-borne diseases.						
2.0 Know diseases that can be spread through contact with infected persons						
3.0 Know faecal-orally transmitted diseases						
<b>GENERAL OBJECTIVE: 1.0</b> Know common insect born diseases.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Classify insect borne diseases according to vectors and causative organisms e.g	Lecture	Projector Text book	Draw and label various disease vectors	Demonstrate	Projector	Continuous assessment

i. Viral ii. Bacterial iii. Helminth etc. 1.2 Identify signs and symptoms of disease listed in 1.1 above 1.3 Identify the causative agents for the diseases listed in 1.1 above 1.4 Describe the mode of transmission of the common insect borne diseases 1.5 Explain the mechanical and biological concept of transmission of insect borne diseases 1.6 Describe immune-prophylaxis, chemo-prophylaxis, chemo-therapy, biological and physical measures in the control of insect borne diseases 1.7 Apply the measures in 1.6 above in the control of insect borne diseases.	Demonstration	Internet Lecture notes Charts Pictures	Distinguish between vectors' features Distinguish between features of disease agents		Video/Audio devices Models	Practical Examination
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**GENERAL OBJECTIVE: 2.0** Know diseases that can be spread through contact with infected persons and objects

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 List the diseases that can be transmitted through contact with an infected person or object 2.2 Identify the causative agent of diseases in 2.1 2.3 Classify the diseases in 2.1 above according to the causative agents as: i. Viral ii. Bacterial iii. Helminth etc. 2.4 Explain the mode of transmission to the disease in 2.1 above 2.5 Identify signs and symptoms of diseases transmitted by contact e.g i. Sexually transmitted diseases ii. Leprosy iii. Scabies etc 2.6 Describe the causative agents to the diseases listed in 2.5 above.		Projector Text book Internet Lecture notes Charts Pictures				Continuous assessment Practical Examination

2.7 List the infections that can be transmitted through body laceration.						
2.8 Apply preventive and control measures against the diseases listed in 2.2 above in a community.						
<b>GENERAL OBJECTIVE: 3.0</b> Know faecal-orally transmitted diseases						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 List diseases that are transmitted through gastro-intestinal tract 3.2 Classify the diseases in 3.1 above according to the causative agents e.g i. Viral ii. Bacterial iii. Helminth etc. 3.3 Identify the signs and symptoms of the diseases listed in 3.1 above. 3.4 Describe the mode of transmission of the diseases listed in 3.1 above. 3.5 Explain the treatment, prevention and control of the diseases in 3.1 above.		Projector Text book Internet Lecture notes Charts Pictures				Continuous assessment  Practical  Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>				
<b>COURSE TITLE: HUMAN NUTRITION</b>				
<b>COURSE CODE: EDC 211</b>				
<b>DURATION:</b>	Lecture: - 30 hours	Tutorial: Nil	Practical: - 15 hours	Total: <b>45 hours</b>
<b>CREDIT UNITS: 3</b>				
<b>GOAL:</b> This course is designed to provide students with in depth knowledge of Human nutrition				
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:				
1. Identify Nigerian staple foods and their uses. 2. Understand energy determination in foods 3. Understand the epidemiology of nutritional problems associated with imbalanced consumption of staple foods. 4. Recognize sources of nutritional data and nutritional status 5. Understand nutritional care in pregnancy and lactation. 6. Understand the principles of geriatrics nutrition. 7. Understand the principles of sport nutrition. 8. Understand the nutritional component of primary health care (PHC)				

<b>GENERAL OBJECTIVE: 1.0</b> Understand nutritional epidemiology and Nigerian staple foods.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Define nutritional epidemiology 1.2 Define staple foods 1.3 Identify staple foods in Nigeria 1.4 Classify staple foods identity above according to their food groups. 1.5 List the nutritive value of staple foods in each of 1.3 above. 1.6 State the uses of each of 1.3 above.	Teacher explains definition of Nutritional epidemiology <ul style="list-style-type: none"> <li>Teacher should define staple foods</li> <li>Teacher should classify staple foods</li> <li>Teacher should list nutritive value of staple foods</li> <li>Teacher should state the use of staple food</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	1.1 Collect samples of all common staple food	Organize students into different groups	Projector Video/Audio devices Models	<ul style="list-style-type: none"> <li>Test</li> <li>Examination</li> </ul>
<b>GENERAL OBJECTIVE: 2.0</b> Understand energy determinants in foods.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Energy determinants in foods 2.1 Explain the importance of energy determinants in foods 2.2 Define the calorific value of foods 2.3 List the methods of determining the calorific value of foods 2.4 Explain each of 2.3 above 2.5 List the calorific values of different foods 2.6 List the limitation of each of 2.3 above 2.7 Determine the calorific values of different foods using each method in 2.3 above.	i. Teacher explains the importance of energy determinants in food ii. Teacher should define the calorific value of food iii. Teacher should list the methods of determining the calorific value of food iv. Teacher should explain the methods of listed calorific value of foods v. Teacher should list the calorific value of different food vi. Teacher should list the limitation associated with determining the calorific value of food viii. Teacher should explain the methods involved in determining the calorific value of different food	Projector Text book Internet Lecture notes Charts Pictures	1.1 Collect samples for the determination of calorific value of different food samples	Organize students into different groups	Projector Video/Audio devices Models	<ul style="list-style-type: none"> <li>Test</li> <li>Examination</li> </ul>
<b>GENERAL OBJECTIVE: 3.0</b> Understand the epidemiology of common Nutritional problems associated with imbalanced consumption of staple foods.						

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 Summarize Epidemiology of nutritional problem associated with Nigerian staple foods 3.2 List the nutritional problems associated with imbalanced consumption of each of Nigerian staple food like maize, rice, cassava etc. e.g. i. Protein energy malnutrition(PEM) ii. Marasmus iii. Beriberi iv. Xerophthalmia v. Pellagra vi. Stunting vii. Obesity etc. 3.3 Explain each of 3.1 above under the following headings; i. Causes/ Etiology ii. Symptoms iii. Prevalence iv. Preventive measures	<ul style="list-style-type: none"> <li>Teacher List the nutritional problems associated with imbalanced consumption of each of Nigerian staple food like maize, rice, cassava etc.</li> <li>Teacher should explain the listed nutritional problems associated with imbalanced consumption of staple food</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Not applicable	Organize students into different groups discussion	Projector Video/Audio devices Models	<ul style="list-style-type: none"> <li>Test</li> <li>Examination</li> </ul>
<b>GENERAL OBJECTIVE: 4.0</b> Recognize sources of nutritional status and nutritional data.						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation

4.1 Nutritional status and nutritional data 4.2 Define nutritional status 4.3 Identify sources of nutritional data such as nutritional assessment methods e.g clinical observation, anthropometric measurement, dietary evaluation, biochemical tests and vital statistics, survey etc. 4.4 Explain each of 4.2 above under the following headings; i. Principles ii. Methodology results and interpretation iii. Uses and limitations 4.5 Identify risk factors for overweight and obesity in developed and developing countries.	<ul style="list-style-type: none"> <li>Teacher should define nutritional status</li> <li>Teacher should identify the sources of nutritional data</li> <li>Teachers should explain the sources of nutritional data</li> <li>The teacher should identify the risk factors for obesity and overweight</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Determination of obesity and overweight using BMI approach	Organize students into different groups	Projector Video/Audio devices Models	<ul style="list-style-type: none"> <li>Test</li> <li>Examination</li> </ul>
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**GENERAL OBJECTIVE: 5.0** Understand nutritional care in pregnancy and lactation.

<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
5.1 Discuss Nutritional care in pregnancy and lactation 5.2 State the nutritional needs of pregnant and lactating mothers. 5.3 Assess the nutritional status of pregnant woman using weight, height, blood etc. 5.4 Compare 5.2 above with available standards 5.5 Provide nutritional care for pregnant woman 5.6 Advise pregnant and lactating woman on correct choice of food intake 5.7 Plan menu for pregnant and lactating woman	<ul style="list-style-type: none"> <li>Teacher should state the nutritional needs of pregnant and lactating mother</li> <li>Teacher should explain ways of assessing the nutritional status of pregnant women and lactating mothers</li> <li>Teachers should guide the students on how to compare measured values with recommended standards</li> <li>The teacher should explain how nutritional care is provided for pregnant women</li> <li>Teachers should explain to students on the correct choice of</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Demonstrate the different methods of weaning for lactating mothers and pregnant	Organize students into different groups	Projector Video/Audio devices Models	<ul style="list-style-type: none"> <li>Test</li> <li>Examination</li> </ul>

5.8 List and explain the nutritional factors affecting fertility e.g. obesity, balanced nutrition, under nutrition.	food intake for pregnant and lactating mothers. <ul style="list-style-type: none"> <li>Teachers should mention suitable menu plan for pregnant and lactating mothers</li> <li>Teachers should list and explain the nutritional status affecting fertility</li> </ul>					
<b>GENERAL OBJECTIVE: 6.0</b> Understand the principles of geriatrics nutrition.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
6.1 Discuss principles of geriatrics nutrition 6.2 Define geriatrics 6.3 Identify the problems of the geriatrics 6.4 List the nutritional needs of geriatrics 6.5 Explain each of 6.3 above 6.6 Plan menu for the geriatrics	i. Teachers should define geriatric nutrition ii. Teachers should identify the problems of the geriatrics iii. Teachers should list the nutritional geriatrics needs	Projector Text book Internet Lecture notes Charts Pictures	1.1 Collect food samples and supplements	Teachers demonstrate the preparation	Projector Video/Audio devices Models, food samples	<ul style="list-style-type: none"> <li>Test</li> <li>Examination</li> </ul>
<b>GENERAL OBJECTIVE: 7.0</b> Understand the principles of sports nutrition.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Principles of sports nutrition 7.1 Explain the relationship between nutrition and sports 7.2 Identify different sports groups 7.3 Explain nutritional needs of each of 7.2 above 7.4 Plan menus for each of 7.2 above	i. Teachers explain the relationship between nutrition and sports ii. Teachers list different types of sports group ii. Teachers explains the nutritional needs of the various sports group iii. Teachers describe the menu required for each of the groups	Projector Text book Internet Lecture notes Charts Pictures	Prepare a menu plans for the various sports groups	Arrange the students into groups	Projector Video/Audio devices, cardboards, markers	Test Examination
<b>GENERAL OBJECTIVE: 8.0</b> Understand the nutritional component of primary health care.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

Nutrition as a component of primary health care 8.1 Explain primary health care (PHC) 8.2 List the components of PHC e.g. immunization, environmental sanitation, essential drugs, Family planning, etc. 8.3 Explain each of 8.2 above 8.4 Explain the relationships between nutrition and other components of PHC.	-Teachers should explain concept of primary health care -Teachers should enumerate the components of primary health care -Teachers explain each of the components of PHC -Teachers should show the link between nutrition and each of the components	Projector Text book Internet Lecture notes Charts Pictures	Show pictures and videos - Pictures/videos showing malnourished conditions across the various groups at risk - Immunization charts - Various family planning methods - Essential drugs and first aid box	Organize students into various groups	Projector Video/Audio devices, cardboards, markers, flip Charts	Test Examination
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<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: PUBLIC HEALTH ADMINISTRATION</b>						
<b>COURSE CODE: EDC 212</b>						
<b>DURATION:</b>	Lecture: - 30 HOURS	Tutorial: NIL	Practical: -	Total: 30 HOURS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to introduce students to some basic managerial principles and techniques						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Understand the principles of management in Public Health Administration 2.0 Understand management functions 3.0 Understand the concept of leadership 4.0 Understand the theory of motivation 5.0 Understand the importance of effective communication in an organization 6.0 Know the workings of Public Health Organizations						
<b>GENERAL OBJECTIVE:</b> 1.0 Understand the principles of management in Public Health Administration.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>



Principles of management 1.1 Define management 1.2 Explain the nature and scope of management 1.3 Explain the objectives of management 1.4 Explain the basic functions of management 1.5 Identify manpower needs in an organization 1.6 State the recruitment procedure in an organization 1.7 Explain the need for training and development in an organization 1.8 Explain the basic methods of compensation of workers 1.9 Explain the process for staff discipline.	<ul style="list-style-type: none"> <li>• Teachers should define management</li> <li>• Teachers should explain the nature and scope of management</li> <li>• Teacher should explain the basic functions of management</li> <li>• Teachers should list manpower needs in an organization</li> <li>• Teachers should list the recruitment procedures in an organization</li> <li>• Teachers should explain the needs for training and development in an organization</li> <li>• Teachers should explain the basic methods of compensation of workers</li> <li>• Teachers should explain the process of staff discipline.</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Presentation of term papers on management processes, recruitment, and discipline in an organization	Arrangement of students into groups for preparation and presentation of their term papers	Projector Video/Audio devices Internet Books periodicals	<ul style="list-style-type: none"> <li>• Test</li> <li>• Examination</li> <li>• Assignments</li> </ul>
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**GENERAL OBJECTIVE: 2.0** Understand management functions.

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Management functions- (planning, organizing, coordination, control etc.) 2.1 Explain who is a manager and his responsibilities 2.2 Define planning and types of planning 2.3 Explain the needs for planning and planning processes 2.4 Identify tools of management	<ul style="list-style-type: none"> <li>• Teachers should explain the term Manager and state the functions of a manager</li> <li>• Teachers should define planning and list types of planning</li> <li>• Teachers should explain the importance of planning</li> <li>• Teachers should list the tools of management</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Prepare organizational charts of selected establishments	Teachers should organize students into groups to prepare organizational charts	Projector Text book Internet Charts Pictures	Test Examination Assignments

2.5 Define organizing and its processes	<ul style="list-style-type: none"> <li>Teachers should define term organizing and explain the process of organizing</li> <li>Teachers should explain the need for organizing</li> <li>Teachers should describe the basic organizational structures</li> <li>Teachers should define the term coordination and explain the process of coordination</li> <li>Teachers should state the major areas of coordination</li> <li>Teachers should define the term control and explain the techniques of control in management</li> <li>Teachers should state the limitations of control in management</li> </ul>					
2.6 Explain the needs for organizing						
2.7 Design a basic organizations structure						
2.8 Define coordination and its processes						
2.9 Discuss the needs for coordination						
2.10 Identify major areas of coordination e.g. human, material and financial						
2.11 Define control and its techniques in management						
2.12 Explain the needs for control						
2.14 Identify the limitations of the control functions.						
<b>GENERAL OBJECTIVE: 3.0</b> Understand the concept of leadership.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Leadership 1.1 Define leadership 1.2 Identify types of leadership 1.3 Discuss issues and problems of leadership in organization in Nigeria. 1.4 Explain Leadership theories 1.5 Explain Type and style of leadership	-Teachers should define leadership -Teachers should explain the types of leadership -Teachers should discuss issues and problems of leadership -Teachers should explain leadership theory Teachers should explain types and styles of leadership	Projector Text book Internet Lecture notes Charts Pictures	Non applicable	Non applicable	Non applicable	Test Examination
<b>GENERAL OBJECTIVE: 4.0</b> Understand the theory of motivation in management.						

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Motivation theory 1.1 Define motivation 1.2 Explain major motivational theories (Maslow's and theories X, Y etc.) 1.3 Discuss motivational tools and their effectiveness 1.4 Discuss issues (problems and prospects) in motivating the Nigerian workers.	-Teachers should define motivation -Teachers should explain the theories of motivation -Teachers should discuss motivational tools -Teachers should discuss problems and prospects of motivation	Projector Text book Internet Lecture notes Charts Pictures	Non applicable	Non applicable	Non applicable	Test Examination
<b>GENERAL OBJECTIVE: 5.0</b> Understand the importance of effective communication in an organization.						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Communication in an organization 1.1. Define communication 1.2. Discuss the communication process 1.3. Identify characteristics of effective communication in an organization 1.4. Discuss different systems of communication in an organization 1.5. Discuss the implications of effective communication in an organization 1.6. Discuss communication barriers in an organization	-Teachers should define communication Teachers should discuss the process of communication -Teachers should state the characteristics of effective communication -Teachers should discuss different systems of communication -Teachers should discuss the effect of effective communication -Teachers should discuss the barriers of communication	Projector Text book Internet Lecture notes Charts Pictures	Non applicable	Non applicable	Non applicable	Test Examination
<b>GENERAL OBJECTIVE: 6.0</b> Know the workings of Public Health Organizations						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation



Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Sociology, medicine and epidemiology 2.1 Explain the nature and scope of medical sociology 2.2 Define social epidemiology, culture, social health and social determinations of health 2.3 Explain the concept of “health” and “ill health”, health and behavior and factors affecting behavior 2.4 Analyze the social-cultural implication of ill – health	<ul style="list-style-type: none"> <li>Teachers should explain the nature and scope of medical sociology</li> <li>Teachers should define the following terms: social epidemiology, culture, social health.</li> <li>Teachers should explain the concept of health and ill health; health and behavior.</li> <li>Teachers should explain the social determinants of health</li> <li>Teachers should explain the factors affecting behavior</li> <li>Teachers should analyze the social-cultural implication of ill-health</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Non applicable	Non applicable	Non applicable	Test Examination

**GENERAL OBJECTIVE: 3.0** Explain the causes and ways family/society respond to illness

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 Social response to common tropical diseases 3.2 Identify the causes of tropical diseases e.g. bilharzias, chronic malaria, sleeping sickness, river blindness, poliomyelitis, sickle cell anemia, conjunctivitis, worm infestation, kwashiorkor, hepatitis, cardiovascular diseases, diabetes, hypertension, mental illness. 3.3 Justify family/societal response to each of the diseases stated in 3.1 above	<ul style="list-style-type: none"> <li>Teachers should state the causes of the following diseases: bilharzias, chronic malaria, sleeping sickness, river blindness, poliomyelitis, sickle cell anemia, conjunctivitis, worm infestation, kwashiorkor, hepatitis, cardiovascular diseases, diabetes, hypertension, mental illness.</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures				Test Examination

**GENERAL OBJECTIVE: 4.0** Explain the relationship between societal class and illness

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
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Classify diseases relationships 4.1. Categorize diseases into diseases of the affluent and diseases of poverty e.g. hypertension, cardiovascular diseases, diabetes, stroke, obesity, kwashiorkor, kidney diseases etc. 4.2. Explain the relationships between social class and the diseases in 4.1 above	<ul style="list-style-type: none"> <li>• Teachers should categorize diseases into diseases of affluence and poverty with examples in each case</li> <li>• Teachers should explain the relationship between social class and diseases</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures				Test Examination
<b>GENERAL OBJECTIVE: 5.0</b> Describe the contemporary nature of the practice of traditional and modern medicine						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Modern and traditional health care delivery 5.1 Describe the socio- cultural setting of modern health institutions 5.2 Describe the characteristics unique to traditional health institutions 5.3 Explain the health implication of traditional medicine to the health delivery system 5.4 Describe the best method of health care delivery using modern hospitals, health centers, dispensaries as points of references 5.5 List factors influencing the choice between modern medicine practice and traditional medicine practice e.g i. Poverty ii. Belief iii. Customs iv. Inadequacy of hospital v. Attitude of Health workers 5.6 Discuss factors in 5.7 Analyze the contributions of traditional medicine to Public Health in Nigeria.	<ul style="list-style-type: none"> <li>• Teachers should describe the socio-cultural setting of modern and traditional health institutions and their characteristics</li> <li>• Teachers should explain health implication of traditional medicine to the health delivery system</li> <li>• Teachers should guide the students in determining the best method of health care delivery.</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures				Test Examination
<b>GENERAL OBJECTIVE: 6.0</b> Explain causes and effects of mental illness						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

Psychiatric health care 6.1 Define mental health and mental illness 6.2 Differentiate between psychosis and Neurosis 6.3 Describe the organization of psychiatric hospital 6.4 Examine the development of Neuromental hospitals in Nigeria 6.5 Explain the advantages and disadvantages of the psychiatric hospitals 6.6 List causes of mental illness 6.7 Analyze the social response to mental illness in Nigeria 6.8 State the measures for promoting mental health in Nigeria	<ul style="list-style-type: none"> <li>• Teachers should differentiate between mental health and mental illness; psychosis and neurosis.</li> <li>• Teachers should describe organization of psychiatric/neuro mental hospitals and their development in Nigeria.</li> <li>• Teachers should explain the advantages and disadvantages of the psychiatric hospitals</li> <li>• Teachers should list causes of mental illness and analyze the social response to mental illness in Nigeria</li> <li>• Teachers should state the measures for promoting mental health in Nigeria.</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures					Test Examination
<b>GENERAL OBJECTIVE: 7.0</b> Explain how to care for vulnerable groups (under five, pregnant women, immune-compromised, aged, destitute, physically-challenged etc.)							
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>	
Care for the vulnerable groups 7.1. Explain the term vulnerability 7.2. Discuss different vulnerable groups e.g i. The poor ii. Physically-challenged iii. Children iv. Aged v. Women 7.3. List and explain the physical, mental, social and psychological needs for vulnerable groups 7.4. Examine the health needs of vulnerable groups 7.5. State how to conditioned the physical and social environment to meet the needs of vulnerable groups	<ul style="list-style-type: none"> <li>• Teachers should explain the term vulnerability</li> <li>• Teachers should state the different vulnerable groups</li> <li>• Teachers should explain the various needs of the vulnerable groups</li> <li>• Teachers should discuss the health needs of the vulnerable groups</li> <li>• Teachers should explain the conditioning of physical social environment for vulnerable groups</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures					Test Examination

<b>GENERAL OBJECTIVE: 8.0</b> Explain the present socio-cultural and public health problems in Nigeria						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Public health care problems of the country 8.1. Describe the present health pattern in Nigeria utilizing current WHO reports, bulletins, journals and newspapers. 8.2. Analyze the current health problems and their solutions as per current available sources 8.3. Identify social agencies and their contribution to health e.g Red cross, Nigeria Social Insurance Trust Fund (NSITF), Civil Society Organization (CSO)	<ul style="list-style-type: none"> <li>Teachers should describe the present health pattern in Nigeria and analyze the associated health problems and their solutions.</li> <li>Teachers should state the social agencies in Health in Nigeria</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Preparation of term papers on: i. Evaluation of health services in selected communities in the country ii. Evaluation of the role of social agencies in the development and promotion of health care in Nigeria	Organize the students into groups for the term papers	Projector Text book Internet Lecture notes Charts Pictures Seminar	Test Examination Assessment of Seminar presentation

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: HEALTH EDUCATION AND PROMOTION</b>						
<b>COURSE CODE: EDC 214</b>						
<b>DURATION:</b>	Lecture: - 30 HOURS	Tutorial: NIL	Practical: - 15 HOURS	Total: 45 HOURS		
<b>CREDIT UNITS: 3</b>						
<b>GOAL:</b> This course is designed to enable students acquire knowledge and skills on how to help communities and to appreciate the essence of healthy living.						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Understand the basic concept of Health Education						
2.0 Understand the importance of adequate planning in the implementation of effective health education						
3.0 Understand the elements of good communication						
4.0 Identify the various audio-visual aids used in health education and how to prepare them						
5.0 Understand the preparation of teaching/health talk for the various groups of clients in the community						
6.0 Identify the strategies for effective health education in the community						
<b>GENERAL OBJECTIVE:</b> 1.0 Understand the basic concept of health education						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation



Basic concept of health education 1.1. Define Health Education 1.2. Outline the history of health education in developing and developed countries 1.3. Outline the scope of health education 1.4. Explain the principle of health education 1.5. List various methods of health education	<ul style="list-style-type: none"> <li>Teachers should define Health Education</li> <li>Teachers should narrate the history of health education nationally and internationally</li> <li>Teachers should state the scope and settings of health education</li> <li>Teachers should explain the principles of health education</li> <li>Teachers should state the various methods and media of health education</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures			Projector Video/Audio devices Models	<ul style="list-style-type: none"> <li>Test</li> <li>Examination</li> </ul>
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**GENERAL OBJECTIVE: 2.0** Understand the importance of adequate planning in the implementation of effective health education

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Importance of adequate planning in the implementation of effective health education 2.1. List the key points to be considered in planning an effective health education program 2.2. Describe the barrier to effective health education e.g. language barrier, cultural, literacy level etc. 2.3. Plan health education program for a given situation	<ul style="list-style-type: none"> <li>Teachers should state the factors affecting the planning of effective health education programme</li> <li>Teachers should discuss the barriers to effective health education</li> <li>Teachers should describe the process of planning health education programme</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Develop Health Education work plan for selected situations	Organize students into groups for work plan development	Projector Text book Internet Lecture notes Charts Pictures	Test Examination Assignments

**GENERAL OBJECTIVE: 3.0** Understand the elements of good communication

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Element of good communication 3.1. Define communication 3.2. Identify the components of communication process 3.3. List the various types of communication	<ul style="list-style-type: none"> <li>Teachers should define communication</li> <li>Teachers should explain the communication process</li> <li>Teachers should list the types of communication</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures				Test Examination

3.4. Describe various methods of communication	<ul style="list-style-type: none"> <li>Teachers should explain methods and media in communication and health education</li> </ul>					
<b>GENERAL OBJECTIVE: 4.0</b> Identify the various audiovisual aids used in health education and how to prepare them						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Audio – visual aids used in health education and how to prepare them 4.1. Define audio-visual aids 4.2. Describe various types of audio –visual aids used in health education 4.3. Identify various audio-visual aids. e.g. .overhead projectors etc 4.4. Execute a health education plan using all necessary audio –visual aids 4.5. Develop a typical visual aid that can be used to teach a group of clients	<ul style="list-style-type: none"> <li>Teachers should define audio-visual aids</li> <li>Teachers should describe the various audio-visual aids in health education</li> <li>Teachers should describe how to develop and use audio-visual aids in health education</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Develop and use audio-visual aids in health education	Arrange students into groups for development and use of audio-visual aids	Projector Text book Internet Lecture notes Charts Pictures	Test Examination
<b>GENERAL OBJECTIVE: 5.0</b> Understand the preparation of teaching /health talk for the various groups of the clients in the community						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Teaching planned health talk for various groups of clients 5.1 Develop a teaching talk for various groups of clients 5.2 Conduct micro-teaching 5.3 Evaluate the effectiveness of health education programme	<ul style="list-style-type: none"> <li>Teachers should explain the preparation of health talk for groups</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	<ul style="list-style-type: none"> <li>Present health talks for identified groups</li> <li>Conduct micro teaching</li> <li>Present evaluation plan for health education programmes</li> </ul>	Organize students into groups for health talk presentation, micro teaching and programme evaluation		Test Examination Assignments Assessment of seminar papers
<b>GENERAL OBJECTIVE: 6.0</b> Identify the strategies for effective health education in the community.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Strategies for effective health education in the community. 6.1 List various strategies for effective health education.		Projector Text book Internet Lecture notes				Test Examination

6.2 Develop various strategies for teaching members of the community for solving health problems.		Charts Pictures				
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<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: MATERNAL AND CHILD HEALTH</b>						
<b>COURSE CODE: EDC 215</b>						
<b>DURATION:</b>	Lecture: - 30 HOURS	Tutorial:	Practical: - 15 HOURS	Total: 45 HOURS		
<b>CREDIT UNITS: 3</b>						
<b>GOAL:</b> This course is designed to enable students to acquire necessary knowledge and skills of maternal and child health so as to reduce the prevalence morbidity and mortality in the community.						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Understand maternal and child health needs and resources available in the community						
2.0 Describe the immunization schedule for children 0-5 years and women of childbearing age.						
3.0 Understand how to organize and train health workers/personnel in the community (voluntary village health workers (VVHW), traditional birth attendants (TBA).						
4.0 Recognize when to refer “high risk” individual to other health personal/facilities for specialized health care						
5.0 Understand how to collaborate with Government ministries, Department and Agencies, non-governmental organizations with interest in health matters such as; WHO, UNESCO, UNICEF, UNDP, UNEP, Water Aid etc.						
<b>GENERAL OBJECTIVE:</b> 1.0 Understand Maternal and Child Health needs and resources available in the community						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
MCH needs and resources in the community 1.1.Define maternal and child health (MCH) 1.2.List the aims of MCH 1.3.Identify MCH needs 1.4.Identify health/medical personnel normally available in the rural community for MCH care e.g. i. Traditional birth attendant ii. Community health workers iii. Voluntary village health workers 1.5.Explain the roles of personnel identified in 1.4 above and their limitation	<ul style="list-style-type: none"><li>Teachers should: define MCH, list aims of MCH, state MCH needs, list health personnel and their role in MCH</li><li>Teachers should explain the nutritional needs of pregnant women</li></ul>	Projector Text book Internet Lecture notes Charts Pictures			Projector Video/Audio devices Models	<ul style="list-style-type: none"><li>Test</li><li>Examination</li></ul>

1.6.Explain the nutritional needs of pregnant woman						
<b>GENERAL OBJECTIVE: 2.0</b> Describe the immunization schedule for children 0-5 years and women of childbearing age.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Routine immunization schedule for children 0-5 years and women of childbearing age 2.1. Explain the term immunization 2.2 . List common childhood diseases against which immunization is required 2.3 . Explain immunization schedule for children 0-5 years and women of child bearing age 2.4 . Identify factors that could facilitate the acceptance of immunization 2.5 . Identify the barriers to effective immunization 2.6 . List dangers of inappropriate immunization in the community	Teachers should: explain the term Immunization; list child hood immunizable diseases: explain immunization schedule for children 0 -5 years and women of child bearing age; state factors facilitating immunization acceptance	Projector Text book Internet Lecture notes Charts Pictures	Prepare Immunization Chart for children 0- 5 years and children of child bearing age	Organize students into groups to prepare the chart		Test Examination Assignments
<b>GENERAL OBJECTIVE: 3.0</b> Understand how to organize and train health Workers/personnel (VVHW, VHPs, TBA etc.) in the community						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
How to organize and train other health workers/personnel in the community 3.1. Identify the roles of other health workers in the community 3.2. Plan a specific educational activity for each group in 3.1 above such as seminars, workshops, discussion etc. 3.3. Implement the planned educational/training program in 3.1 above Monitor and evaluate the planned program in 3.2	<ul style="list-style-type: none"> <li>Teachers should identify the role of health workers in the community</li> <li>Teachers should educate the students on how to plan educational activities for the health workers</li> <li>Teachers should expose students to preparation of programme implementation, monitoring and evaluation plans</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	<ul style="list-style-type: none"> <li>Develop and present work plans for seminars workshops etc</li> <li>Present action plans, monitoring and evaluation plans for health programmes</li> </ul>	Organize students into groups for presentation of work plans		Test Examination Assignments Assessment of students presentations

<b>GENERAL OBJECTIVE: 4.0</b> Recognize when to refer” High risk” clients to other health facilities for a specialized care						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
When to refer “High Risk” clients to other health personnel/ facilities for specialized care 4.1. Define ‘high Risk’ 4.2. Identify “high risk” clients 4.3. Identify common childhood diseases 4.4. Treat minor disease conditions occurring in mother and child such as malaria, worm infestation etc. 4.5. Prepare referral notes for specialized facility 4.6. Refer client to specialized facility	<ul style="list-style-type: none"> <li>Teachers should: define high risk clients and common childhood diseases</li> <li>Teachers should demonstrate the treatment of common minor disease conditions in mothers and children</li> <li>Teachers should show the students how to prepare referral slips and refer clients accordingly</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	<ul style="list-style-type: none"> <li>Prepare referral slip</li> <li>Describe how to refer clients</li> </ul>	Access the prepared referral slips and correct accordingly		Test Examination Assignment
<b>GENERAL OBJECTIVE: 5.0</b> Understand how to collaborate with Government ministries, Department and Agencies, non-governmental organizations with interest in health matters such as; WHO, UNESCO, UNICEF, UNDP, UNEP, Water Aid etc.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Collaboration with ministries and NGOs such as UNICEF, UNESCO, UNDP etc. 5.1. Identify NGOs 5.2. State the functions of NGOs 5.3. List the sources of funding of the NGOs in 5.1 above 5.4. Describe the activities of NGOs in 5.1 above 5.5 Explain the importance of the line ministries and NGOs in the effective provision of maternal and child health care 5.7 Organize and implementation plan activities such as workshops, seminars with these organizations	Teachers should: State National and International Government and Non-Governmental Organizations in MCH; explain their activities, sources of funding and their importance in MCH service delivery <ul style="list-style-type: none"> <li>Teachers should describe how to initiate, organize and collaborate training programmes like workshops, seminars etc.</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Present work plans on training programmes	Assess students presentation on MCH training work plan	Projector Text book Internet Lecture notes Charts Pictures	Test Examination Assignments

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>							
<b>COURSE TITLE: INTRODUCTION TO PHARMACOLOGY</b>							
<b>COURSE CODE: EDC 216</b>							
<b>DURATION:</b>	Lecture: - 30 HOURS	Tutorial: NIL	Practical: -	Total: 30 HOURS			
<b>CREDIT UNITS: 2</b>							
<b>GOAL:</b> The course is intended to enable students acquire basic knowledge of pharmacology							
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:							
1.0 Understand the meaning of pharmacology							
2.0 Understand various sources of drugs							
3.0 Recognize drugs categories, generic and trade names of drugs							
4.0 Understand the basics of drug in prescription							
5.0 Understand the legislative and safety issues in drug use							
<b>GENERAL OBJECTIVE: 1.0</b> Understand the meaning of pharmacology							
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>	
Meaning of pharmacology 1.1 Define pharmacology 1.2 Identify the division of pharmacology 1.3 Describe the characteristics and properties of drugs 1.4 Mention some terminologies used in pharmacology	• Teachers should: define pharmacology, classify pharmacology, describe characteristics and properties of drugs, and list common terminologies in pharmacology	Projector Text book Internet Lecture notes Charts Pictures			Projector Video/Audio devices Models	• Test • Examination	
<b>GENERAL OBJECTIVE: 2.0</b> Understand various sources of drugs							
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>	
2.1 Explain the various sources of drug 2.2 State and explain the various root of drug administration	• Teachers should explain sources of drug and routes of drug administration	Projector Text book Internet Lecture notes Charts Pictures				Test Examination	
<b>GENERAL OBJECTIVE: 3.0</b> Recognize drugs categories, generic names and their interaction with human body system							
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>	

<p>Drugs categories</p> <p>3.1 Identify and explain drugs categories, generic, trade names of drugs</p> <p>3.2 Mention the therapeutic actions of drugs and the rationale for using drugs to treat diseases</p> <p>3.3 State reasons for side, allergic and other effects of drugs administration.</p> <p>3.4 Discuss drugs abuse, misuse, drugs tolerance and drug addiction.</p> <p>3.5 State preventive measures for drug abuse</p> <p>3.6 Identify the various drugs used in managing common ailment</p> <p>3.7 State the uses of each drugs mentioned in 3.6 above</p>	<ul style="list-style-type: none"> <li>• Teachers should classify drugs and explain the generic and trade names</li> <li>• Teachers should list therapeutic drugs, explain the actions and rational for use in treatment</li> <li>• Teachers should explain allergic and side effects and their reasons</li> <li>• Teachers should discuss drug abuse, misuse, tolerance and addiction.</li> <li>• Teachers should list drugs used in managing common ailment and explain their usage</li> </ul>	<p>Projector</p> <p>Text book</p> <p>Internet</p> <p>Lecture notes</p> <p>Charts</p> <p>Pictures</p>					Test Examination
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**GENERAL OBJECTIVE: 4.0** Understand the basic of drug prescription

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
<p>4.1 Differentiate between prescription drug and over the counter drug.</p> <p>4.2 Outline factors to consider while prescribing drugs</p> <ul style="list-style-type: none"> <li>- Personal information of patient (weight, Age)</li> <li>- Form and dose</li> <li>- Side effects</li> </ul> <p>4.3 Describe features of a prescription</p> <ul style="list-style-type: none"> <li>- Person prescribing and signature</li> <li>- For who the prescription is intended</li> <li>- What is prescription</li> <li>- Instruction on use of Drug</li> </ul> <p>4.4 Identify who are legally allowed to prescribe drugs</p> <p>4.5 Discuss mode of drug consumption</p> <ul style="list-style-type: none"> <li>- b.d</li> <li>- t.d</li> <li>-qid etc</li> </ul>		<p>Projector</p> <p>Text book</p> <p>Internet</p> <p>Lecture notes</p> <p>Charts</p> <p>Pictures</p>				Test Examination

**GENERAL OBJECTIVE: 5.0** Understand the legislative and safety issues in drug use

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Drugs legislations and safety 5.1 define drugs legislation and safety 5.2 identify and explain the agencies for the approval and use of drugs 5.3 List the requirements of approved drugs.	<ul style="list-style-type: none"> <li>Teachers should define drug legislation and safety</li> <li>Teachers should: list and explain drug regulatory agencies and approval requirement</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures				Test Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: GENERAL LABORATORY TECHNIQUES</b>						
<b>COURSE CODE: GLT 111</b>						
<b>DURATION:</b>	Lecture: - 15 HOURS	Tutorial: NIL	Practical: -15 HOURS	Total: 30 HOURS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to expose students with basic Laboratory tools and safety considerations						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Understand the use of laboratory wares and simple laboratory equipment 2.0 Understand the calibration of glassware 3.0 Identify common laboratory hazards 4.0 Understand basic safety rules and procedures in the laboratory						
1.1 <b>GENERAL OBJECTIVE: 1.0</b> Understand the use of laboratory wares and simple laboratory equipment						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Use of simple laboratory wares and equipment 1.1. Identify the different types of laboratory glassware’s e.g. beakers, test-tube, funnel etc 1.2.State the use of different laboratory wares in 1.1 above 1.3.Identify different types of fittings in the laboratory e.g. water, light etc	• Teachers should identify the different types of laboratory glass wares and their uses; identify different types of laboratory fittings, greases and their applications  • Teachers should demonstrate the preparation of	Projector Text book Internet Lecture notes Charts Pictures	Prepare cleansing reagents for laboratory wares  Interpret safety codes and symbols	Observation and assessment of skills	Projector Video/Audio devices Models	• Test • Examination



1.4. Identify different types of greases and their application on joints.	cleansing reagents for laboratory wares, explain the use of parcel in centered glass, nickel and platinum crucible • Teachers should demonstrate laboratory cleaning using appropriate cleaning agent					
1.5. Prepare cleansing reagent for laboratory wares						
1.6. Explain the use of parcel in centered glass, nickel, and platinum crucible.						
1.7. Clean laboratory ware using appropriate cleaning agents						
1.8. Storage and maintenance laboratory wares.						
<b>GENERAL OBJECTIVE: 2.0</b> Understand the calibration of glassware						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Calibration of glassware 2.1.1 Define calibration 2.1.2 Distinguish between calibration and graduation 2.1.3 Explain the effect of heat on laboratory glassware 2.1.4 Read fluid levels of calibrated glassware e.g. water level, mercury level 2.1.5 Graduate simple laboratory glassware using standard volumes. 2.1.6 Identify types of glassware suitable for storage in the laboratory. 2.1.7 Identify types of glassware suitable as containers e.g. for storage of photo sensitive reagent and some acids. 2.1.8 Identify other laboratory storage containers e.g. plastics and ceramics 2.1.9 State the precautions necessary for the storage of chemicals e.g. hydrofluoric acid in paraffin and silver nitrate in amber containers.	• Teachers should define calibration; differentiate between calibration and graduation; explain the effect of heat on laboratory glass wares; demonstrate how to read fluid levels of calibrated glass wares and graduate simple glass wares • Teachers should identify types of glass wares suitable for storage in the laboratory and the precautions necessary for the storage of chemicals	Projector Text book Internet Lecture notes Charts Pictures				Test Examination
<b>GENERAL OBJECTIVE: 3.0</b> Identify common laboratory hazards						

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Common laboratory hazards 3.1. List different types of laboratory hazards e.g. electrical, chemical, fire, biological, mechanical, physical etc.	<ul style="list-style-type: none"> <li>Teachers should list types of laboratory hazards</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures				Test Examination
<b>GENERAL OBJECTIVE: 4.0</b> Understand basic safety rules and precautionary measures in the laboratory.						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Basic safety rules and precautionary measures in the laboratory 4.1. List basic laboratory safety rules including the use of PPE 4.2. Display chart showing safety symbols and rules in the laboratory 4.3. Interpret the symbol in 4.2 above. 4.4. Describe procedure for treating acid burn in the laboratory 4.5. Describe procedure for treating case of inhalation or swallowing of toxic gases and liquids in the laboratory 4.6. Classify and extinguish various types of fire 4.7. Describe procedure for treating burns in the laboratory 4.8. List possible source of microbial contamination of laboratory workers 4.9. Describe procedure to be adopted in the prevention of microbial contamination in the laboratory 4.10. Describe first aids measures to be taken in case of microbial contamination in the laboratory 4.11. Describe the precaution against electric shocks in the laboratory	<ul style="list-style-type: none"> <li>Teachers should list basic laboratory safety rules, display safety charts and interpret safety symbols.</li> <li>Teachers should describe procedures for treating cases of accidents and emergencies in the laboratory</li> <li>Teachers should classify fire and explain how to extinguish it</li> <li>Teachers should list sources of microbial condition and explain how to prevent and control it in the laboratory</li> </ul>	Projector Text book Internet Lecture notes Charts Pictures	Simulation and role play on first aid management of accident and emergencies in the laboratory	Observation and assessment of skills		Test Examination



Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 Identify types of disease surveillance e.g; i. Passive surveillance ii. Active surveillance iii. Sentinel surveillance iv. Syndromic surveillance 2.2 Enumerate uses of disease surveillance e.g; i. Recognition of acute problems that demand immediate actions, ii. Assessment of specific problem in order to discern long term trend and epidemiological patterns iii. Assess impact of interventions etc. 2.3 Explain the use of surveillance tools	Lecture          Discussion	Projector Text book Internet Lecture notes Charts Pictures	Guide and supervise practical activities	Practice the use of surveillance tools	Reporting forms Computer etc	Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 3.0</b> Explain a disease surveillance system						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
Disease surveillance systems 3.1. Describe disease surveillance system 3.2. Identify different type of disease surveillance	Lecture       Discussions	Projector Text book Internet Lecture notes Charts Pictures				Continuous Assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 4.0</b> challenges facing disease surveillance in Nigeria						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
4.1. List factors affecting disease surveillance system e.g human, financial, legislation, equipment, logistics 4.2. Analyze factors listed in 4.1 4.3. Explain the institutional arrangement for disease surveillance in Nigeria e.g Federal, State and LGA, Health Ministries and departments	Lecture       Discussions	Projector Text book Internet Lecture notes Charts Pictures				Continuous assessment Practical Examination
<b>SPECIFIC OBJECTIVE: 5.0</b> Outline the components and processes of disease surveillance						
Specific Learning Objectives (Theory)	Teacher Activities	Learning Resources	Specific Learning Objective (Practical)	Teacher Activities	Learning Resources	Evaluation

5.1 Describe the component of disease surveillance	Lecture	Projector				Continuous Assessment Practical Examination
5.2 Explain the processes involved in disease surveillance		Text book				
5.3 Explain how disease Surveillance can be used in disease prevention	Discussions	Internet Lecture notes Charts Pictures				

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: PRACTICE OF ENTREPRENEURSHIP</b>						
<b>COURSE CODE: EED 216</b>						
<b>DURATION:</b>		Lecture: - 15	Tutorial:	Practical: - 15	Total: 30 HRS	
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to equip the students with necessary entrepreneurial skills for self-employment.						
GENERAL OBJECTIVE: On completion of the course, the student should be able to:						
1. Know techniques for generating business ideas and the process of identifying and assessing business opportunities						
2. Know how to evaluate a business idea for developing an enterprise						
3. Know methods of product/service selection						
4. Understand the process and procedure for starting an Enterprise						
5. Know the operational techniques in managing an Enterprise						
6. Understand the various existing industries and support agencies in Nigeria						
7. Appreciate the role of commercial and development banks in small and medium scale industries development						
8. Understand the role of personal savings and portfolio investment in National Economic Development						
<b>GENERAL OBJECTIVE: 1.0</b> Know techniques for generating business ideas and the process of identifying and assessing business opportunities						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Define business opportunity.	i. Explain business opportunities and process of exploring them.	Text Books, journals.	i. Identify business Opportunities using SWOT Analysis.	i. Guide students to identify business opportunities using SWOT Analysis	Computer, text books, Use of Internet and relevant video clips.	• Test • Examination
1.2 State the process of Exploring opportunities.	ii. Explain the process of product/service selection.		ii. Conduct market survey and select the most viable business venture.	ii. Guide students to conduct market survey to enable them select the most viable business venture.		
1.3 Identify business opportunities (SWOT Analysis)	iii. Explain SWOT Analysis and how		iii. Demonstrate using appropriate application package, product selection, product tracking, order tracking etc.			
1.4 State the process						

of Conducting a market survey in other to establish demand/ supply gap. 1.5 State the process of business idea generation.	to identify business opportunities. iv. Explain the process of conducting market survey and selecting a viable business venture. v. Explain the process of business idea generation.			iv. Set up student groups with the task of setting up a small business enterprise. v. Invite a successful entrepreneur to give a talk. vi. Make the student/ group generate his/their viable business idea which would further be subjected to feasible business plan.	successful businesses.	
<b>GENERAL OBJECTIVE: 2.0</b> Know how to evaluate a business idea for developing an enterprise						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Define the concept of business plan.  2.2 Explain the process of preparing preliminary project proposal.  2.3 Explain the process of preparing a detailed business plan.  2.4 Conduct a model business plan on a selected venture.	i. Explain a business idea.  ii. Explain the concept of business plan and project proposal.  iii. Relate business idea to business plan and project proposal.  iv. Describe the steps in preparing a model business plan.	Textbooks, Projector, Journey	i. Prepare a preliminary project proposal. ii. Set-up students' groups with an initial start up capital of N10,000.00 and the task of setting up a small business enterprise. iii. Conduct a modest business plan on a selected venture. Present the plan to a panel of successful entrepreneur for assessment. iv. Explore Internet for company profile, product catalog, product information, URL management.	i. Guide students in preparing a preliminary project proposal. ii. Using the on going business project guide students to complete a business plan and present it to a panel of successful entrepreneurs, the plan should consider sale forecast, time sheet analysis, employee tracking, loan amortization etc. iii. Explore Internet for company profile, product catalog, product information, URL management.	Computer with complete accessories and Data-base, Internet connection, Textbooks.	Test Examination

			v. Conduct a model business plan on a selected venture.	iv. The written business plan should be assess as part of continuous assessment		
<b>GENERAL OBJECTIVE: 3.0</b> Know methods of product/service selection						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 Define product /service. 3.2 Explain the nature and characteristics of product/service. 3.3 Explain product selection criteria. 3.4 Identify key factors associated with product selection. - Infrastructure - Technology - Availability of raw material. - Government Policy/Regulation -Legal aspects of business. 3.5 Explain venture idea generation. 3.6 Explain the steps involved in preliminary screening. 3.9 Explain the different steps in preparing pre-feasibility study. 3.10 Evaluate adequacy of infrastructural facilities for product selection. 3.11 Identify the relevant technology available for the selected product. 3.12 Evaluate sources and adequacy of raw materials for the selected product. 3.13 Explain effects of government	i. Explain product selection, criteria and factors associated with selection. ii. Explain venture idea generation. iii. Explain steps involved in preliminary screening. iv. Explain steps in preparing pre-feasibility study. v. Explain the adequacy of infrastructural facilities, relevant technology and adequacy of raw materials for the selected product. vi. Explain effects of government policy and regulation as well as legal aspects of	Text Books Journals Publications Projector	i. Analyze a given case in product selection. Select a product ii. Prepare feasibility report on a modern business and evaluate the viability, methodology and CBA. (Cost Benefit Analysis) iii. Generate venture idea on selected exportable product obtained from the web.	i. Guides students to analyze a case in product selection. Invite an ii. Entrepreneur to speak on venture idea generation and product selection ii. Guide students to prepare feasibility studies on a model institution based business and evaluate the viability, methodology and (Cost Benefit Analysis) CBA. iii. Guide students to use web based information to generate venture idea on an exportable product. iv. Organize visit to a small business outfit to understudy infrastructural facilities, available technology, sources and adequacy of raw materials, effect of government policy and regulation and legal aspects of the business.		Test Examination





Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
5.1 Define management and a manager 5.2 Explain the functions of management and a manager 5.3 Explain management structure for an enterprise. 5.4 Explain the communication process in the management of an enterprise. 5.5 Explain the techniques and skills of: i. Planning ii. Organizing iii. Staffing iv. Leading Controlling 5.6 Explain the basic techniques of marketing, production and financial management in an enterprise. 5.7 Explain the principles of record keeping, auditing and taxation.	i. Explain the functions, techniques and skills of management. ii. Draw a management structure to suit the viable project selected by students iii. Explain the techniques of the functional areas of management. iv. Explain principles of record keeping, auditing and taxation.	Text Books, Specimen of financial records, Cardboard, Markers. Organogram	i. Draw appropriate organogram for a small scale enterprise. ii. Identify communication process in the management of an enterprise. iii. Explain the function areas of business management, planning, organizing, etc.	i. Guide student to draw an organ gram to suit the selected business venture. ii. Demonstrate the techniques and skills of communication process in the management of the selected business venture, using computer networking of not less than 3 computers. iii. Demonstrate, using appropriate application packages, techniques and skills of: Business planning, Business positioning	Text books, Sample Record books, Projector, organogram	Test Examination
<b>GENERAL OBJECTIVE: 6.0</b> Understand the various existing industries and support agencies in Nigeria						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
6.1 Explain various industry/ support agencies. 6.2 Explain the types, and sources of materials used in both manufacturing	Explain Industry, types and support agencies. Explain the nature, types and sources	Textbooks, journals, CD's/Film VCR	Identify types and sources of plants and machinery used in small scale industries, nature	i. Guide students to visit websites to identify types and sources of	Computer and accessories with Internet connection.	Test Examination

<p>and service Industries.</p> <p>6.3 Explain the types and sources of plants and machinery used in small scale Industries.</p> <p>6.4 Explain the various information and assistance for vital areas like finance, registration, project selection, training, marketing, research, quality control, raw materials, patent information etc.</p> <p>6.5 Explain environmental factors associated with Industrial and economic development in Nigeria.</p>	<p>of materials, machineries and information in enterprises.</p>		<p>and type of material inputs and information about market and financial assistance.</p> <p>Prepare a report and share experience.</p>	<p>machinery and plants, material inputs for small scale industries, information and assistance for finance, market etc.</p> <p>ii. Form groups and assign them out of class.</p> <p>iii. Visit/experience in selected enterprise.</p> <p>iv. Groups to share experiences on the visit.</p>	<p>Textbooks and journals.</p>	
<b>GENERAL OBJECTIVE: 7.0</b> Appreciate the role of commercial and development banks in small and medium scale industries development						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
<p>7.1 Identify financial institutions involved in entrepreneurial development</p> <p>7.2 Explain the role of Banks and financial institutions in the creation and development of enterprises.</p> <p>7.3 Explain government policy on financing small and medium enterprises.</p> <p>7.4 Explain the role of microfinance (Formal and Informal) in financing enterprise.</p> <p>7.5 Explain the role of capital markets in Financing enterprise.</p>	<p>i. Explain the role of financial institutions in entrepreneurial development.</p> <p>ii. Explain the role of commercial and development Banks in the promotion and development of SME.</p> <p>iii. Examine government policies on financing SME.</p> <p>iv. List support agencies for SME's Nigeria- NEPC, IDCs, BOI, NACR DB etc.</p> <p>v. Explain government policy on financing SMEs.</p>	<p>Textbooks, journals and other publications.</p>	<p>Identify sources of Finance to SME's and how to access their funds</p>	<p>i. Guide students to identify sources of finance for SME's.</p> <p>ii. Invite a Finance Expert to give a talk.</p> <p>iii. Guide students to develop healthy banking culture:</p> <p>iv. Good customer relations</p> <p>v. Regular lodgment Bank reconciliation.</p>	<p>Projector, Computer, Internet.</p>	<p>Test Examination</p>

<b>GENERAL OBJECTIVE: 8.0</b> Understand the role of personal savings and portfolio investment in National Economic Development						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
8.1 Define the following; Income, expenditure and savings 8.2 Explain the role of savings in starting and sustaining businesses 8.3 List the benefits of interest. 8.4. Explain personal Financial Planning and management. 8.5 Explain shopping habits 8.6 Explain portfolio investment-shares, bonds, debentures.	i. Explain savings ii. Explain how savings are channeled into productive ventures. iii. Explain the benefits of interest. iv. Explain the role of budgeting in personal economics v. Describe shopping habits vi. Analyze portfolio investment. vii. Explain thrift societies and how they operate.	Textbooks, journals and other publications .	i. Calculate interest rates. ii. Develop personal budget for one month. iii. Create a spreadsheet for a budget iv. Learn to save and invest in portfolio.	i. Show various methods of computing interest ii. Guide students to develop a personal budget for one month iii. Guide students to create a spreadsheet for a budget iv. Invite a stock broker to give a talk.	Textbooks, Journals and other publications, computer.	Test Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN PUBLIC HEALTH TECHNOLOGY</b>				
<b>COURSE TITLE: Research Methodology</b>				
<b>COURSE CODE: GNS 218</b>				
<b>DURATION:</b>	Lecture: - 30Hrs	Tutorial: Nil	Practical: - Nil	Total: 30Hrs
<b>CREDIT UNITS: 2</b>				
<b>GOAL:</b> The course is designed to equip students with knowledge of research skills, to be inquisitive, innovative and discretionary and to present research outcome in a logical order.				
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:				
1.0	Explain the meaning of research			
2.0	Explain the feature of research method			
3.0	Describe the approach to research			
4.0	Describe the design and planning of research			
5.0	Explain the sampling techniques			
6.0	Explain the use of statistics in research			
7.0	Describe the conduct and presentation of research result			
8.0	Explain Layout of research report			

<b>GENERAL OBJECTIVE: 1.0</b> Explain the meaning of research					
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources
1.1 Define research 1.2 List and describe the types of research (e.g. historical, descriptive, experimental etc.) 1.3 Explain the aims of research	Teacher should define research and list the types of research including the aims of research.	Projector Text book Internet Lecture notes Charts Pictures Whiteboard Marker	Students should define research and list the types of research including the aims of research.	Teacher should guide the students to arrive at a correct answer.	Projector Video/Audio devices Models Internet Lecture notes Charts Pictures Whiteboard Marker
<b>GENERAL OBJECTIVE: 2.0</b> Explain the features of research methods					
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective(Practical)	Teachers Activities	Learning Resources
2.1 Meaning of research methodology 2.2 Explain research methods 2.3 List and explain the method of conducting research (e.g. survey)	Teacher should explain methodology used in research based on their types to suit the research.	Projector Text book Internet Lecture notes Charts Pictures White board Marker	Student should apply methodology to their research.	Teacher should guide the student to come up with a better methodology.	Journals Student's project Internet Newspapers Magazines
<b>GENERAL OBJECTIVE: 3.0</b> Describe approach of research					
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective(Practical)	Teachers Activities	Learning Resources
3.1 Choose a field of research 3.2 Formulate a research title 3.3 Search for useful sources of information on the field of research (museums, market, hospitals, library, internet, etc.) 3.4 Compile an index card system for research title 3.5 Review related literature on the subject matter of research	Teacher should lead the student to select an area of research and formulate a researchable topic and review literature basic on the study objectives.	Projector Text book Internet Lecture notes Charts Pictures Whiteboard Marker Journal Projects	Students should formulate a research topic and review literature using available materials like journals and students' projects.	Teacher should guide the student in formulating and reviewing literature.	Journals Students' projects Internet Magazines Newspapers

<b>GENERAL OBJECTIVE: 4.0</b> Describe the design and planning of a research					
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>
4.1 Explain research design 4.2 Give examples of research design 4.3 List and explain the methods to be applied in research design e.g. intervention and non – intervention studies, questionnaire, interview, home visits and observation. 4.4 Explain the merits and demerits of various research design 4.5 Choose any of the methods most appropriate to your research (project)	The Teacher should explain Research Design and the different types of design used in Research.	Projector Text book Internet Lecture notes Charts Pictures Whiteboard Marker	Student should use appropriate design for their research.	Teacher should guide the use of design in research for appropriateness.	Projector Video/Audio Devices Models
<b>GENERAL OBJECTIVE: 5.0</b> Explain sample techniques					
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>
5.1 Define sampling 5.2 List type of sampling (e.g. Stratified, random etc) 5.3 Explain the types sampling in 5.2 above 5.4 Explain the advantages and disadvantages of each types of sampling in 5.2 above 5.5 Choose the sample size or population appropriate to your research 5.6 Identify any of the methods in 5.2 above for a particular research	Teacher should explain Sampling and its relevance to research process.	Projector Text book Internet Lecture notes Charts Pictures Whiteboard Marker	Student should take sample, representative of the population of their study and use it to generalize.	Teacher should guide the student in sample of population of the study.	Projector Text book Internet Lecture notes Charts Pictures Whiteboard Marker
<b>GENERAL OBJECTIVE: 6.0</b> Explain the use statistics in research					
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>
6.1 Define basic statistics 6.2 Identify the tests used in basic statistics 6.3 Explain the characteristics of each of the test in 6.2 above 6.4 Determine the suitable of each of the test in 6.2 above	Teacher should explain basic statistics and tests in the statistics. He should also explain the characteristics of the tests identified.	Lecture notes Internets Whiteboards Marker Charts	Student should test hypothesis for verification.	Teacher should guide the test procedure.	Lecture notes Internets Whiteboards Marker Charts
<b>GENERAL OBJECTIVE: 7.0</b> Describe the conduct and presentation of research result					

<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>
1. Carryout the research experiment using any research design. 2. Collect data for the experiment in 7.1 above. 3. Analyzed the data using appropriate methods. 4. Interpret the results obtained from the research. 5. Write up the report of the research conducted	Teacher should explain the procedure for carrying out a research and selection of appropriate design for the study. He should explain how results are interpreted and report documented.	Whiteboard Marker Textbooks Lecture notes Internet Charts	Student should carryout research and select sample, that is representative of the research population  They should also interpret their results and write report on the research.	Teacher should guide the student to arrive at a more valid and credible research.	Whiteboard Marker Textbooks Lecture notes Internet Charts
<b>GENERAL OBJECTIVES: 8.0</b> Layout of research report					
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>
Explain Research Report Layout using the following Format: - Preliminary - Title paper - Preface - Acknowledgement - Abstract - Table of contents - List of tables, charts etc. - List of abbreviations - Body of the reports - Introduction - Literature review - Material and method - Results and findings - Discussion - Conclusion and recommendations - References	Teacher should explain the procedure in reporting research outcomes based on some agreeable headlines.	Whiteboard Marker Textbooks Lecture notes Internet Charts	Students should report the outcome of their research based on the agreeable headings.	Teacher should guide the student in writing appropriately.	Whiteboard Marker Textbooks Lecture notes Internet Charts

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: Project Writing</b>						
<b>COURSE CODE: EDC 221</b>						
<b>DURATION:</b>	Lecture: - 20 hours	Tutorial: - 10 hours	Practical: - 60 hours	Total: 90Hrs		
<b>CREDIT UNITS: 4</b>						
<b>GOAL:</b> This course is intended to equip students with the knowledge and skill to research and write a comprehensive final year project report.						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Review current literature pertaining to a specific issue or problem						
2.0 Assess the extent of the issue or problem in epidemiology and disease control						
3.0 Gather and analyse information to identify potential solutions and reach a conclusion						
4.0 Produce a final report of the project						
<b>SPECIFIC Objective: 1.0</b> Review current literature pertaining to a specific issue or problem.						
<b>Specific Learning Objective</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1. Choose, under guidance, an appropriate topic for investigation 1.2. Review current literature relevant to chosen topic	i. Guide students in selecting a suitable topic ii. Provide guidance in finding sources of information	Journals Internet, Textbooks, Project reports etc.	ii. Review current literature in area of interest ii. produce a list of probable topics	Assist students to select the most appropriate topic from the probable list compiled	Internet, Textbooks, Project reports	
<b>SPECIFIC Objective: 2.0</b> Assess the extent of the issue or problem in epidemiological and disease control						
	Support students in their investigation	Textbooks, Internet, Notes	1) Determine the appropriate methods of data collection 2) Commence data collection Investigate the issue or problem in epidemiological disease control practice 3) commence data collection	i. Carry out effective supervision of the students project.	Research materials, tools and log book Textbooks, Internet, Journals	
<b>SPECIFIC Objective: 3.0</b> Gather and analyse information to identify potential solutions and reach a conclusion						
		.	3.1 Analyse the data collected in order to reach a conclusion	Supervise students in data analysis	Data sheets, calculator, computer, Statistical packages. Textbooks, Journals, project report.	

<b>SPECIFIC Objective: 4.0</b> Produce a final report on the project						
4.1 Produce final written report on project		Textbooks, Internet, Notes	4.1 Students should produce final report on the project in accordance with school guidelines	Supervise students appropriately	Project guidelines, Project report	

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: FIELD EXPERIENCE/TRIPS</b>						
<b>COURSE CODE: EDC 222</b>						
<b>DURATION:</b>	Lecture: -	Tutorial:	Practical: - 60 hours	Total: 60 HRS		
<b>CREDIT UNITS: 4</b>						
<b>GOAL:</b> This course is designed to equip students with practical experience required for epidemiological investigation						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:						
<b>1.0</b> undertake basic epidemiological investigation						
<b>SPECIFIC OBJECTIVE: 1.0</b> Understand the roles of Environmental Health epidemiologist in industrial setting						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
			<ul style="list-style-type: none"><li>• Carry out the rudiments of epidemiological activities</li><li>• Apply Epidemiological procedures</li><li>• Organize Epidemiological investigations</li><li>• Make inference on the impact of Epidemiological services on disease control</li><li>• Use Epidemiological tools to conduct a survey</li><li>• Determine the spread, prevention and incidence of communicable diseases using Epidemiological data</li><li>• Prepare report on Epidemiological investigations</li></ul>	Supervise appropriately.	<ul style="list-style-type: none"><li>•Computer</li><li>•Computing application e.g. excel, power point, access</li><li>•Epidemiological tools etc.</li></ul>	Field report



<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: SEMINAR</b>						
<b>COURSE CODE: EDC 223</b>						
<b>DURATION:</b>	Lecture: - 15	Tutorial:	Practical: - 15	Total: 30 HRS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to equip students with the skills required in content development and presentation						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 To develop an appropriate content for a seminar topic						
2.0 To present a seminar to an appropriate audience						
<b>SPECIFIC OBJECTIVE: 1.0</b> To develop an appropriate content for a seminar						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Choose an appropriate topic for the seminar	Access and decide on the appropriateness of the topic chosen	Projector, White boards, Internet, Lecture notes, Charts, Pictures.	Undertake effective literature review to develop content for the seminar		Journals Internet Seminar reports Models Computer and computer software e.g. Excel, Access	Seminar report
<b>SPECIFIC OBJECTIVE: 2.0</b> To present seminar to an appropriate audience						
<b>Specific Learning Objectives (Theory)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teacher Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Explain various approaches and factors influencing effective presentation e.g. Dress code, time management, fluency, boldness, resourceful, etc.	Identify factors that influence rating in seminar presentation	Projector, White boards, Internet, Lecture notes, Charts, Pictures.	i. Develop a power point document for presentation	Guide students to practice seminar preparation and presentation	Projector Video/Audio devices Models	Oral Presentations Written Presentation
2.2 Express how to control audience effectively			ii. Present the seminar in accordance with school guidelines on presentation and appearance			

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>				
<b>COURSE TITLE: CLINICAL POSTING</b>				
<b>COURSE CODE: EDC 224</b>				
<b>DURATION:</b>	Lecture: - 20 hours	Tutorial: 20 hours	Practical: - 50 hours	Total: 90 HRS
<b>CREDIT UNITS: 6</b>				

<b>GOAL:</b> This course is designed to equip students with practical experience needed for day-to-day operation in healthcare, research and allied institutions						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Apply history taking for various environmental health and epidemiological procedures						
2.0 Conduct home visitation						
3.0 Know the method of data collection, collation, analysis, interpretation and presentation						
4.0 Prepare Community based surveys						
<b>GENERAL OBJECTIVE: 1.0</b> Understand history taking for various environmental health and epidemiological procedures						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Identify various environmental or epidemiological events requiring history taking 1.2 Obtain history of food poisoning 1.3 Obtain history of environmental media pollution (water, air, soil)	Instructor to guide the students in identifying the event e.g Disease outbreaks, disasters, pest outbreaks, and other event requiring epidemiological investigations e.g food poisoning, water pollution, air pollution and land pollution	<ul style="list-style-type: none"> <li>Log book</li> <li>Environmental monitoring devices e.g noise level meter, air meter, etc</li> </ul>	Students should be able to monitor the air, water, food and land using some monitoring tools.	Teachers should be resourceful during the process by guiding the students appropriately	<ul style="list-style-type: none"> <li>Log book</li> <li>Flip Chart</li> <li>Tapes</li> <li>Measuring devices</li> <li>White board</li> <li>Marker etc</li> </ul>	<ul style="list-style-type: none"> <li>Oral Presentation</li> <li>Written Presentation</li> <li>Group presentation</li> <li>Demonstration</li> </ul>
<b>GENERAL OBJECTIVE: 2.0</b> Conduct home visitation						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Conduct home visitation	The teacher should organize for home visitation and guide students appropriately during the process of the visitation	Checklist, Pen, Paper, Graphs, Camera etc				<ul style="list-style-type: none"> <li>Report writing</li> <li>Verbal presentation</li> </ul>
<b>GENERAL OBJECTIVE: 3.0</b> Know the method of data collection, collation, analysis, interpretation and presentation						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
3.1 Collect data on diseases incidence, aetiology, etc. 3.2 Analyze and present data on diseases incidence, aetiology	Guide the students through the process	Projector, Flip Chart, Journals, White board, Marker.	3.4 Students should be exposed to the field to collect data 3.5 Students should analyse the data	Guide the students in carrying out credible assignments	Checklist, Projector, Journals, White board, Marker,	Group work Personal assessment

3.3 Prepare and present paper on public health events, causes and prevention			3.6 They should communicate their findings through class presentations		Students previous works	
<b>GENERAL OBJECTIVE: 4.0</b> Perform Community-based survey						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
Perform Community based survey	Instructor to guide the students in carrying out community-based survey for situation analysis through observations, asking questions, consulting individuals and organizations, as well as collecting samples of food, water, etc. for analysis	Log book, Checklist, Pen, Paper, Sample materials, equipment, etc	Students should be able to observe and record findings and also collect samples correctly using available resources	Instructor should guide students on the process	Log book Checklist Pen Paper Sample collection container, etc.	<ul style="list-style-type: none"> <li>• Test</li> <li>• Presentation (Individual and Group)</li> <li>• Situation Analysis to ascertain progress or otherwise</li> </ul>

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: ENTOMOLOGY AND PEST CONTROL</b>						
<b>COURSE CODE: EHT 202</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: - 15	Total: 45 HRS		
<b>CREDIT UNITS: 3</b>						
<b>GOAL:</b> This course is intended to provide the students with knowledge and skills to control pest of public health importance						
<b>SPECIFIC OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Identify pest and vectors of public health importance						
2.0 Explain disease agents transmitted by pest and vectors of public health importance						
<b>SPECIFIC OBJECTIVE: 1.0 Identify pest and vectors of public health importance</b>						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
1.1 Identify and classify pest and insect that transmit diseases	Lectures	Projector Text book	Catch and identify insects and pests that transmit human diseases.		Insect catchers, traps, PPE, Quadrants, Attractants, Projector, Video/Audio devices, Models.	Continuous assessment
1.2 Describe bionomics of insect and other pest	Discussions	Internet Lecture notes Charts Pictures				Practical  Examination
<b>SPECIFIC OBJECTIVE: 2.0 Explain Understand helminths of public health significance</b>						

Specific Learning Objectives(Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 List diseases transmitted by pest and vectors 2.2 Describe life cycle and Natural History of diseases agents 2.3 Explain disease transmission and control of insects of public health importance 2.4 Describe the prevention and control of pest diseases of public health importance 2.5 Describe the Prevention and control of helminthes of public health importance	Lecture  Discussion	Projector Text book Internet Lecture notes Charts Pictures	Identify different disease agents transmitted by pest and vectors	Demonstrate procedures for the identification of the disease agents.	Identification keys Microscopes Laboratory materials Stains and reagents Charts internet	Continuous assessment Practical Examination

<b>PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL</b>						
<b>COURSE TITLE: HEALTH ECONOMICS</b>						
<b>COURSE CODE: EDC 226</b>						
<b>DURATION:</b>	Lecture: - 30	Tutorial:	Practical: -	Total: 30 HRS		
<b>CREDIT UNITS: 2</b>						
<b>GOAL:</b> This course is designed to enable the student apply appropriate economics principles in the planning and administrating of environmental health services in the community.						
<b>GENERAL OBJECTIVE:</b> On completion of the course, the student should be able to:						
1.0 Know the fundamental principles of environmental health economics.						
2.0 Understand the basic economics concept and model in environmental health.						
3.0 Know the concept of economic cost of health.						
<b>GENERAL OBJECTIVE:</b> 1.0 Know the fundamental principles of environmental health economics.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>

1.1 Define i. Economics ii. Economic goods and services iii. Economic wants iv. Opportunity cost v. Scarcity, demand and supply vi. Environmental health economics 1.2 Explain the following: i. National economic goals ii. Role of consumer in the capitalist economy iii. Role of Government in economic system. iv. Budgetary procedures v. National income and distribution vi. Approaches to financial planning. vii. Consumer health viii. Environmental health policy and resource allocation ix. Politics of health care and environmental health services.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discuss</li> <li>• Brainstorm</li> <li>• Evaluate various definitions of economics goods and services, wants and needs etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture notes</li> <li>• Pictures</li> <li>• Charts</li> <li>• Books</li> <li>• Journals</li> <li>• Computer</li> <li>• Projector</li> <li>• DVD/Multimedia Player</li> </ul>	i. Point out difference between goods and services ii. Differentiate wants from needs iii. Analyze the role of epidemiologist in National Economic development iv. Practice budget preparation	<ul style="list-style-type: none"> <li>• Locate</li> <li>• Guide</li> <li>• Demonstrate</li> </ul>	<ul style="list-style-type: none"> <li>• Projector</li> <li>• Charts</li> <li>• Copy of institution's budget</li> <li>• White board,</li> <li>• Marker</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment</li> <li>• Class Test</li> <li>• Presentation</li> <li>• Examination</li> </ul>
<b>GENERAL OBJECTIVE: 2.0</b> Understand the basic economics concept and model in environmental health.						
<b>Specific Learning Objectives (Theory)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Specific Learning Objective (Practical)</b>	<b>Teachers Activities</b>	<b>Learning Resources</b>	<b>Evaluation</b>
2.1 Discuss the determinants of health. 2.2 Explain the concept of private public sector mix in environmental health service delivery in Nigeria and its implications for delivery and cost. 2.3 Explain the basic concept of cost benefit and cost effectiveness analysis in environmental health. 2.4 Explain the basic concept of health insurance/social insurance. 2.5 Explain the impact of economic measures/changes in environmental health.	i. Identify the determinant of health such as: housing, adequate nutrition etc ii. Analyze the cost benefits of private sector participation in Environmental Health Services iii. List and explain the operational	<ul style="list-style-type: none"> <li>• Lecture notes</li> <li>• Pictures</li> <li>• Charts</li> <li>• Books</li> <li>• Journals</li> <li>• Computer</li> <li>• Projector</li> <li>• DVD/Multimedia Player</li> </ul>	i. Demonstrate the impact of housing conditions etc on health ii. Appreciate the role of Public Private Participation in environmental health service delivery e.g Waste collection, cleaning services, pest control iii. Analyze how to surmount health	<ul style="list-style-type: none"> <li>• Locate</li> <li>• Guide</li> <li>• Demonstrate</li> </ul>	<ul style="list-style-type: none"> <li>• Projector</li> <li>• Charts</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment</li> <li>• Class Test</li> <li>• Presentation</li> <li>• Examination</li> </ul>

2.6 Identify the constraints of environmental health financing in the country.	procedures of health/social insurances e.g NHIS iv. Lectures, Discussions, brainstorm		financing constraints.			
2.7 Analyse the concept of health care financing.						
2.8 Explain the methods of mobilizing communities for self-financial and sustainable environmental health projects.						
2.9 Describe the concept of demand and supply in environmental health services.						
2.11 Describe the concept of privatization of environmental health services.						

**GENERAL OBJECTIVE: 3.0** Know the concept of economic cost of health.

Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 Explain the concept of opportunity cost. 3.2 Discuss the various determinants of health. 3.3 Explain the factors that determine the value placed on health by various persons and groups. 3.4 State the actual cost of health.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discuss</li> <li>• Brainstorm</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture notes</li> <li>• Pictures</li> <li>• Charts</li> <li>• Books</li> <li>• Journals</li> <li>• Computer</li> <li>• Projector</li> <li>• DVD/Multimedia Player</li> </ul>		<ul style="list-style-type: none"> <li>• Locate</li> <li>• Guide</li> <li>• Demonstrate</li> </ul>	<ul style="list-style-type: none"> <li>• Projector</li> <li>• Charts</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment</li> <li>• Class Test</li> <li>• Presentation</li> <li>• Examination</li> </ul>

**PROGRAMME: NATIONAL DIPLOMA (ND) IN EPIDEMIOLOGY AND DISEASE CONTROL**

**COURSE TITLE: PUBLIC HEALTH LABORATORY INSTRUMENTATION**

**COURSE CODE: EDC 227**

<b>DURATION:</b>	Lecture: - 15	Tutorial:	Practical: - 15	Total: 30 HRS
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**CREDIT UNITS: 2**

**GOAL:** This course is designed to acquaint the students with the basic laboratory procedures in public health practices

**SPECIFIC OBJECTIVE:** On completion of the course, the student should be able to:

- 1.0 Understand basic terms related to laboratory procedures
- 2.0 Understand serological techniques
- 3.0 Understand procedure for serological tests for bacterial and parasitic infections.

<b>SPECIFIC OBJECTIVE: 1.0</b> Understand basic terms related to laboratory procedures						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
1.1 define antigen, antibody, serology, etc 1.2 Antibody test 1.3 Agglutination test 1.4 Principle of agglutination test	Lecture  Discussion	Projector Text book Internet Lecture notes Charts Pictures	1.1 Demonstrate procedure involved in antibody test, agglutination test 1.2 State the principles of each of the tests	i. Guide the students laboratory activities ii. Ensure availability of required instrument and reagents	Reagents, Test bottles, Laboratory Instructor	Lecture  Practical  Examination
<b>GENERAL OBJECTIVE: 2.0</b> Understand serological techniques						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
2.1 Serological techniques 2.2 Glass ware 2.3 Water bath 2.4 Incubator 2.5 Centrifuge 2.6 Rotating machine 2.7 Collection/presentation and preservation of serological specimen 2.8 Shipment of serological specimen	Explain the technique	Projector Text book Internet Lecture notes Charts Pictures	Guide in practice of the technique	Monitor compliance with procedure	Laboratory instruments, Equipment, Reagent, Laboratory instructor	Lecture  Practical  Examination
<b>GENERAL OBJECTIVE: 3.0</b> Understand procedures for serological tests for bacterial and parasitic infections.						
Specific Learning Objectives (Theory)	Teachers Activities	Learning Resources	Specific Learning Objective (Practical)	Teachers Activities	Learning Resources	Evaluation
3.1 Common serological test for bacterial and parasitic infection 3.2 Syphilis test 3.3 Widal test 3.4 Richettsia 3.8 Hydrated disease 3.9 Toxoplasmosis 3.10 Viral Infection 3.11 HIV antibody test 3.9 Hepatitis Viruses 3.12 Infections of mononuclear 3.13 Rubella Infector 3.14 Cytomegalovirus	i. Explain the procedures ii. Narrate the safety issues to be looked after	Text book Lecture notes Charts Pictures Laboratory equipment and instruments	i. Moderate the practical activities ii. Monitor the result			Lecture  Practical  Examination





## LIST OF MINIMUM RESOURCES FOR NATIONAL DIPLOMA IN PUBLIC HEALTH

### A. LIST OF PHYSICAL FACILITIES

Programme	Laboratory	Studio/Drawing Room and Other
National Diploma (ND) in Public Health Technology	Basic Science (Biology and Chemistry)	1. Audio Visual Studio 2. Museum 3. Side laboratory with a minimum of disease detection and screening equipment based on their objectives of the training

### LIST OF EQUIPMENT IN AUDIO VISUAL STUDIO

S/NO	EQUIPMENT	QUANTITY REQUIRED
1	Video Recorder	1
2	Overhead projector	1
3	Film projector	1
4	Public Address System	1
5	Television set	1
6	Camera	1
7	Computer System	5
8	DVD players	1
9	Microphones	5
10	Scanner	1

### B. HUMAN RESOURCES

#### Lecturers/Instructors Minimum Qualification

#### 1. LECTURER (FIRST DEGREE)

(This is for Licensed Environmental Health Officer)

- Bachelor of Science/Technology (B.Sc/ B. Tech) in Public Health
- Bachelor of Environmental Health Science (B. EHS)/Bachelor of Science (B.Sc) Environmental Health
- Bachelor of Science (B.Sc) Health Education
- Bachelor of Science (B.Sc) Occupational Health
- Bachelor of Science (B.Sc) Environmental Management

#### LECTURER (PGD)

(This is for Licensed Environmental Health Officer with Higher National Diploma (HND) in Environmental Health)

- Post Graduate Diploma (PGD) Public Health
- Post Graduate Diploma (PGD) Environmental Health
- Post Graduate Diploma (PGD) in Education
- Post Graduate Diploma (PGD) Public Health/Epidemiology
- Post Graduate Diploma (PGD) Environmental Management

#### 3. SENIOR LECTURER

(This is for Licensed Environmental Health Officer with either the Qualification in 1 or 2 above)

- Master of Science (M.Sc) in Public Health plus Mphil qualification
- Master of Science (M.Sc) in Environmental Health

**Technical Staff Minimum Qualification for Laboratory/Workshop/Studio/Museum**

- Technologist – HND or equivalent in Public Health Technology
- Technologist – HND or equivalent in Epidemiology and Disease Control
- Technologist – HND or equivalent in Environmental Health Technology
- Technician – ND in Epidemiology and Disease Control
- Technician – ND in Public Health Technology
- Technician – ND in Environmental Health Technology
- Laboratory Assistant – At least SSCE

**For National Diploma**

4 no. Core Lecturers as follows:

1 no. Senior Lecturer and above

1 no. Lecturer II

1 no. Lecturer III/Assistant Lecturer

**LIST OF CONTRIBUTORS**

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