

*National Open University of Nigeria Faculty of Education*



**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**FACULTY OF EDUCATION**

**UNDERGRADUATE STUDENT HANDBOOK**

**NATIONAL OPEN UNIVERSITY OF NIGERIA  
HEADQUARTERS  
JABI, ABUJA**



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## **VISION AND MISSION STATEMENTS OF THE NATIONAL OPEN UNIVERSITY OF NIGERIA**

### ***Vision Statement***

To be regarded as the foremost University providing highly accessible and enhanced quality education anchored by social justice, equity, equality and national cohesion through a comprehensive reach that transcends all barriers.

### ***Mission Statement***

To provide functional, cost effective, flexible learning which adds lifelong value to quality education for all who seek knowledge.

### **NOUN Anthem**

National Open University of Nigeria  
Determined to be the foremost university in Nigeria  
Providing highly accessible  
And enhanced quality education  
Anchored on social justice  
Equity, equality and national cohesion

Come to NOUN  
For quality, cost effective and flexible learning  
That adds lifelong value  
For all who yearn  
For quality education  
And for all who seek knowledge

## **VISION AND MISSION STATEMENTS OF THE FACULTY OF EDUCATION**

### **Vision Statement**

Preparing professional teachers, researchers and leaders through Open and Distance Learning

### **Mission Statement**

To provide quality and effective teacher education programmes using the principles of Open and Distance Learning

## FOREWORD FROM THE VICE CHANCELLOR

The National Open University of Nigeria, the only single mode open and distance learning institution in Nigeria and indeed in the West African sub-region, has come a long way since its establishment in 2002. The University, which began with four schools, has now blossomed into six faculties. The Faculty of Education, being one of them. The institution prides itself in the uniqueness of its vision and mission – to be the foremost university that provides functional cost effective flexible learning, which adds lifelong value to quality education for all who seek knowledge— and in implementing innovative methods that facilitate an enriching learning experience.



As it assiduously works towards the realisation of its vision and mission statements, NOUN continues to take great strides, especially in using technology to make education accessible to millions of Nigerians, irrespective of age, gender, and employment status. To date, the institution has its automated admission, registration, continuous assessment, examinations, and is currently providing tutorial facilitation virtually.

Our programmes, academic staff, and graduates are among the best. More than 90% of our programmes received full or interim accreditation status in the last accreditation exercise. The handbook, which has been designed to meet international standards, complements the University's *General Catalogue* as a reference tool for information on matters specific to the faculty, its programmes, relevant policies, rules and procedures, to guide students through the new experience of learning in an Open and Distance Learning system.

I urge every student of the faculty to read this handbook and make it a constant companion in order to get the best out of their learning experience at NOUN. Welcome on board!



## WELCOME FROM THE DEAN



### **Professor Osuji, U. S. A.**

The Handbook which is the second edition by the Faculty of Education contains the rules and regulations governing the undergraduate programmes in the faculty. It also includes the list of courses, course descriptions and required units for students to graduate for each programme as approved by the Senate of the National Open University of Nigeria (NOUN) under the departments in the faculty. Furthermore, it contains the list of staff of the faculty and those of the servicing faculties of the University. The various committees through which the faculty delivers his services to the university community are also listed.

It is hoped that this document will serve as a guide to new and returning students of the faculty. It is also intended to provide the general public with hands-on information about the studentship of National Open University of Nigeria in the faculty as well as specific information about all the undergraduate programmes on offer.

It is therefore my pleasure to urge all faculty students, staff, in the University community and all education stakeholders to arm themselves with this vital document of the faculty.

**Professor Osuji, U. S. A.**  
*Dean, Faculty of Education*

## **PART 1: INTRODUCTION**

### **1.1 About the National Open University of Nigeria**

The National Open University of Nigeria is the pioneer Open and Distance Learning (ODL) university in Nigeria, which has increased access to university education in the country, as well as ensured that it helped in solving emerging challenges confronting Nigeria and the world at large while maintaining high quality in delivery. The University effectively meets its responsibilities to society, as well as meets the dreams and aspirations of Government (its Proprietor). In doing this through its academic research programme, the University ensures excellent quality always. The University is guided by the Guidelines for Open and Distance Learning (ODL) in Nigerian Universities, as well as other instruments and guidelines issued by the National Universities Commission (NUC). The National Open University of Nigeria strives to make significant impact through its teaching, research and service delivery in Nigeria, Africa and globally. The University implements the ICT-Enabled Supported Blended Learning (IESBL) ODL Model adapted by Nigeria. This model is predicated on a teaching and learning process where course materials in variety of media format and learner support services and facilities play a crucial role.

The National Open University of Nigeria is an ODL university and it offers programmes in both Arts-based and selected Science-based disciplines. The goal is to develop a world-class university that is amongst the best ODL institutions worldwide.

To ensure a logical and well structured growth, the academic structure of the University shall be developed in phases. This chapter of the Academic Brief presents the academic structure of the National Open University of Nigeria and other general academic guidelines.

The academic structure of the National Open University of Nigeria presently consists mainly of faculties and departments. The University has also established an Entrepreneurial and General Studies Centre and a School of Postgraduate Studies. The faculties,

departments and programmes of the University are established after obtaining the approvals of Senate, Council, and NUC. Each faculty is comprised of departments in related fields and the departments are responsible for the academic programmes.

The National Open University of Nigeria is the leading Open and Distance Learning (ODL) institution in the West African sub-region through the provision of affordable, accessible and flexible learning at the undergraduate levels. NOUN presents unprecedented opportunities for liberalising access to university education in Nigeria as a social enabler of learning.

The non-residential nature of the degree programmes makes it possible for NOUN to provide a flexible and self controlled learning system that is rapidly gaining traction in the worlds of contemporary learning processes.

It is with great pride, therefore, that the Faculty of Education outlines what it takes to be a student of this faculty and how the faculty is propelling its mandate as the leading ODL institution in the West African sub-region providing teacher education through Open and Distance Learning.

## **1.2 Studying through Open and Distance Learning at NOUN**

### **1.2.1 Importance of Open and Distance Education in Nigeria**

Open and Distance Education (ODE provides education for all and promotes lifelong learning in Nigeria. It fills the gap created by the closure of sub-standard outreach/satellite campuses across the nation and is cost effective in the education delivery system. Open and Distance Learning improves on the economies of scale. That is, more Nigerians receive quality education but at a reduced cost.

Open and Distance Learning helps on the job teacher training as more teachers can receive education without leaving their immediate vicinity. Some of the other long-term benefits of ODL are poverty eradication and lifelong education. ODL can help with the provision of national orientation and non-formal education and provide avenue to reach the “un-reached” that is, girls and women who cannot leave their homes regularly.

ODL responds effectively to the growing demand of working adults or any others who have difficulties in getting training in conventional education because of lack of flexibility in the timing and duration of academic programmes. ODL provides an opportunity for the empowerment of those most disadvantaged, such as the unemployed, the physically challenged, women and ethnic minorities, as they can embark on courses of their choice within their vicinity.

## **PART 2: ABOUT FACULTY OF EDUCATION**

### **2.0 Introduction**

The Faculty of Education is saddled with the main mission of producing professional teachers through Open and Distance Learning for eradication of mass illiteracy in Nigeria and beyond for successful actualisation of Education for ALL (EFA) and Sustainable Development Goal 4 (SDG4). The Faculty of Education operates under the auspices of a faculty/departmental structure encompassing segment of system reform that hinges on democratisation of academic structures and leadership.

### **2.1 Historical Background**

The Faculty of Education is as old as the National Open University of Nigeria (NOUN). It is one of the four schools that commenced operation in the 2003/2004 academic year. However, in response to the 2016 system reform in the University, the school has transformed from school structure to faculty/departmental structure informed by the strong need to democratise academic structures and leadership. Consequently, with the faculty/departmental switch-over, the faculty now consists of three functional departments, namely the Department of Arts & Social Sciences Education hosting three (3) programmes; the Department of Educational Foundations hosting two (2) programmes; and the Department of Science Education hosting seven (7) programmes which collectively make up the twelve undergraduate programmes of the faculty through which it fulfills its mandate of preparing professional teachers through Open and Distance Learning.

Dr. Mercy Ogunsola-Bandele (now a Professor of Science Education) served as the pioneer Acting Dean of the then School of Education. She served in that capacity from 2003 to 2006. Following the exit of Professor Mercy Ogunsola-Bandele on sabbatical leave, Dr. Ibrahim Olatunde Salawu (now a Professor of Educational Technology) took over and served in the capacity of overseer for a period of six months. Later in 2006, Professor G.A. Badmus was appointed as a substantive Dean of the School. He served from 2006 to 2012. Professor I.O. Salawu was appointed substantive Dean in 2012 following the exit of Professor G.A. Badmus. Professor I.O. Salawu's Deanship expired on

July, 2016 with the school system structure giving way to the faculty/departmental system resulting from the university wide system reform. Consequently, Professor Charity Akuadi Okonkwo was elected as the substantive Dean of the Faculty of Education in July 2016 along with Dr. Juliet O. Inegbedion as the Deputy Dean; Dr. Foluke Florence Fatimayin as the pioneer Head of Department of Arts and Social Sciences Education; Dr. Uchenna Sydney Ajunwa Osuji as the pioneer Head of Department of Educational Foundations; and Dr. Bamikole Ogunleye as the pioneer Head of Department of Science Education. These academics took over in July 2016 and are currently in the faculty and its departments. The Deputy Dean was appointed the Director of Entrepreneurial and General Studies Directorate of the University early 2018. In September, 2018 the second election took place that elected the current Dean, Prof. Osuji, U. S.A.; his deputy, Dr. Owolabi, Josiah; Dr. Foluke Florence Fatimayin as the Head of Department of Arts and Social Sciences Education; Dr. Oba-Adenuga, Olusegun A. as the Head of Department of Educational Foundations; and Dr. Apata, F. F. as the Head of Department of Science Education. Thus, it should be noted that the faculty presently offers twelve fully NUC accredited undergraduate programmes under its existing three departments.

The Registry staff of the faculty is responsible for the day to day non-academic administrative function of the faculty. This team is currently headed by a Deputy Registrar, Mrs. Dayo Akinbowale who took over from the immediate past Faculty Officer Mrs. Kate Anunobi who is also of the rank of Deputy Registrar.

## **2.2 Programmes**

Twelve fully accredited programmes exist in the Faculty of Education and are classified in the three departments thus:

### **A. Department of Arts and Social Science Education**

- i. B.A. (Ed) Business Education
- ii. B.A. (Ed) English Education
- iii. B.A. (Ed) French Education

### **B. Department of Education Foundations**

- i. B.A (Ed) Early Childhood Education
- ii. B.A (Ed) Primary Education

### **C. Department of Science Education**

- i. B.Sc.(Ed) Agricultural Science Education
- ii. B.Sc. (Ed) Biology Education
- iii. B.Sc. (Ed) Chemistry Education
- iv. B.Sc. (Ed) Computer Science Education
- v. B.Sc. (Ed) Integrated Science Education
- vi. B.Sc. (Ed) Mathematics Education
- vii. B.Sc. (Ed) Physics Education

### **2.3 Administration**

The Faculty of Education like other faculties in the University is administered by a democratised leadership system. In this system, the Dean and Deputy Dean provide leadership for the faculty while Heads of various departments provide departmental leadership. The committee system is also enthroned to harmonise all the academic and administrative functions within the departments and faculty thereby providing synergy for related roles and functions. Membership of each of the committees must have at least one staff from each of the various departments amongst whom a Desk Officer is appointed. The Desk Officer provides leadership for the committee. Notable among the existing committees in the faculty are:

- i. Examinations Committee
- ii. Project Committee
- iii. Quality Assurance Committee
- iv. Course Allocation Committee
- v. Registrable Courses Committee
- vi. Curriculum Development Committee
- vii. Admission Committee
- viii. SIWES Committee
- ix. Teaching Practice Committee
- x. Management Information System Committee

- xi. Seminar Committee
- xii. Journal and Conference Committee
- xiii. Library Committee
- xiv. Practicum Committee
- xv. Web Committee
- xvi. Facilitation Committee
- xvii. Staff Welfare Committee
- xviii. Physical Facilities Committee
- xix. SERVICOM Committee
- xx. Records Committee
- xxi. Environmental Health Committee
- xxii. Security Committee

Ad hoc committees are formed, used as the needs arise and dissolved thereafter.



## **PART 3: INFORMATION FOR NEW STUDENTS**

### **3.0 Introduction**

Once a student has been offered admission into any of the programmes, the next exercise is to become a bona fide student of the University. This involves taking a number of steps which are sequentially described below.

#### **3.1 Orientation Programme**

This is designed to help new intakes become familiar with the overall University environment considering the fact that this mode of study is different from their previous study approach. Again, the exercise will help them know and locate the first contact points and register for courses of study. The rules, regulations and administrative set up of the University will be made known to them. Students are introduced to use of University facilities, lines of communication, teaching staff and learner support services to make their transition as smooth as possible.

#### **3.2 Deferment of Admission**

Students who for one reason or the other are unable to take up and continue their registration can write the University for deferment. Such students will write to inform the University of their readiness to take up the offer of admission. If after one year of deferment, the student seeks for an extension, he/she needs to write again for the extension.

#### **3.3 Change of Programme**

##### **3.3.1 Registered Students who wish to Change their Programme of Study**

Students can apply for a change of programme as long as they are qualified for the programme. Such students if already registered would have to buy a change of programme form which will be endorsed by the Centre Director and sent to the faculty for approval before the change can be effected by the MIS/ICT/Administrative Officers at the study centre.

### **3.3.2 New Students who are Wrongly Admitted into a Programme**

If a new student is wrongly admitted to a programme, such a student should lay his/her complaint in writing through the Director to MIS/ICT/Administrative Officer.

### **3.3.3 Change of Course**

Students can apply for a change of programme after paying for the form which must be endorsed by the Centre Director, approved by the departments (after ascertaining that the student is qualified for the new programme).

## **PART 4: PROGRAMME AND DEGREE AWARD REQUIREMENTS**

### **4.0 Introduction**

#### **4.1 Programme Duration**

All the undergraduate programmes in the faculty are structured to run for a minimum of four years and a maximum of eight years for students starting at 100 level or a minimum of three years and a maximum of six years for students at 200 level.

#### **4.2.1 Prerequisite Course**

This refers to any course which must be passed before a student would be allowed to register for certain specified courses at a higher level. It is expected that students who did not pass a prerequisite course but have obtained an acceptable level of achievement (decided by Senate) can be allowed to register concurrently for the prerequisite course failed with the higher level course.

#### **4.2.2 Registration Procedure**

Registration processes in National Open University of Nigeria are treated with utmost seriousness. Without proper registration and documentation, one cannot become a *bona fide* student of the University. Registration for courses and examinations by both fresh and returning students take place at the study centers where applicants' certificates are thoroughly screened. The registration exercise shall not exceed four weeks, after which the course registration portal closes. However, examination registration can continue for another four weeks after which the portal will close for the semester.

#### **4.2.3 Opening and Closing of the Registration Portal**

The registration portal is usually opened at the start of a new semester and closes four weeks after for course registration and eight weeks after for examination registration.

### **4.3 Course Re-Registration**

Course registration is done online on the University's registration portal at [www.nou.edu.net](http://www.nou.edu.net). You are expected to register your courses after you must have completed necessary payments for the semester (For fee schedule, visit <http://nou.edu.net/page/fees-schedule>).

The course registration portal contains the list of all courses offered in each programme. You are expected to register for a minimum of 10 credit units and a maximum of 20 credit units per semester and which must include a minimum of one (1) elective course per semester. You are allowed to register a maximum of 24 credit units where you have carried over courses from the previous semesters.

### **4.4 Add and/or Drop Courses**

In the process of registration, a student for one reason or the other may decide not to take a course already registered for. Such a student is allowed to drop the course and add (replace) it with any other course for the same amount of registration fee. This must be done within the registration period for that semester.

### **4.5 Eligibility for Graduation: Minimum Course Credits for Graduation**

To be awarded a degree in the faculty, a student would have to pass a minimum of 120 and 90 credit units for the four year and three year programmes respectively.

### **Degree Award Requirements**

- For a four year education degree course, a minimum of 120 units should be required for graduation.
- For a direct three year course, a minimum of 90 units should be required for graduation; and
- The student must pass all core and GST courses offered during the programme.

## **4.6 Research Projects**

The steps involved in research projects are as follows.

- Study centres assign students to qualified supervisors. Masters projects should be assigned to supervisors with Ph. D. in relevant areas of specialisation.
- Students are to submit three topics to their supervisors.
- Supervisors approve one topic after necessary modifications and endorse the approval form.
- Students forward approved topics to the study centre.
- Study Centre Directors collate approved topics and send to the faculty in Excel format.

## **4.7 Grading, Moderation and Mode of Submission of Projects**

### **4.7.1 Grading**

- Study centres should make available project assessment sheets to supervisors to avoid discrepancies observed in assessment and grading sheet use.
- Project supervisors should utilise the faculty assessment sheet to assess students' project work.
- Any assessment done on any other form different from the faculty assessment sheet would be rejected.

### **4.7.2. Submission of Completed Students' Project Reports and Scores**

Completed project reports should be sent directly from the study centres to departments. Please note the groupings of programmes based on the departments as presented below.

**Table 1: Grouping of Programmes based on Departments**

<b>Department</b>	<b>Programmes</b>
Educational Foundations	M.Ed. Admin and Planning M.Ed. Educational Technology M.Ed. Guidance and Counselling Postgraduate Diploma in Education (PGDE) B.A. (Ed). Early Childhood Education B.A. (Ed). Primary Education
Science Education	B.Sc. (Ed) Agricultural Science B.Sc. (Ed) Biology B.Sc. (Ed) Chemistry B.Sc. (Ed) Mathematics B.Sc. (Ed) Physics B.Sc. (Ed) Integrated Science B.Sc. (Ed) Computer Science M.Ed. Science Education
Arts and Social Sciences Education	B.A. (Ed) English B.A. (Ed) French B.Sc. (Ed) Business Education

Study centres should write separate covering memos to each of the Heads of Departments with the list of projects to be submitted and full details in hard and soft copy on MS-EXCEL format.

#### **4.7.3 Moderation of Projects**

- External moderators of the rank of Senior Lecturer and above are invited from other universities.
- Each moderator would select thirty projects from each of the available project reports in a programme.
- Project moderation assessment forms are given out to the moderators to specifically reassess the thirty projects selected.
- The scores given by the external moderators would be used to moderate all project scores as follows to ensure uniformity:
  - (i) Subtract the external moderator's score from the supervisor's score to obtain the difference which is

- either positive or negative for each student moderated programme by programme.
- (ii) Add the positive values together and likewise the negative values to get the total of each.
  - (iii) Subtract the total of each in (ii) to obtain a single value which is either positive or negative.
  - (iv) Divide the value from (iii) by 30 to get the difference (positive or negative).
  - (v) If the difference is positive, add the value to the supervisor's scores for each of the students in the programme. If the difference is negative, subtract the value from the supervisor's scores for each of the students in the particular programme.
  - (vi) The result obtained from (v) becomes the project moderated score to be uploaded for each student programme by programme.
    - The final moderated scores would be uploaded into MIS platform for further processing and transfer to each student's portal.

## **4.8 University Policies**

### **4.8.1 Copyright Policy**

Copyright law is a major area of law that affects higher educational institutions. The law allows the owners of the copyright absolute domain for the life of the author plus 50 years. Others cannot reproduce copyrighted works. However, the doctrine of fair use applies in the University.

### **4.8.2 Plagiarism**

It is wrong for students to copy other people's ideas or written work, claiming such as original.

## **4.9 Degree Award Requirements**

This refers to the minimum number of courses a student must take and pass before being eligible for graduation. This is based on all the compulsory courses specified for students on the particular degree programme.

#### 4.9.1 Compulsory and Elective Courses

A compulsory course is a course which a student is required to register for and pass before eligibility for graduation. An elective course, however, may be registered and taken but not necessarily passed.

#### 4.9.2 Minimum Course Credits for Graduation

This is the minimum total number of credit units which a student is expected to pass before graduation. The general minimum requirement is 90units for Direct (200L) entrants while it is 120 units for UME (100L) entrants. This is however higher for some programmes and varies from programme to programme.

#### 4.10. General Studies Courses (GST)

These are University specified general courses for all students. However, some of the courses apply to certain specialisations while others apply to others. General courses must be registered, taken and passed before graduation.

**Table 2: Compulsory General Courses for Programmes in the Faculty of Education**

**(a) Summary of Distribution of Course Credits by Level**

Level	Compulsory	Compulsory	Total
	1 <sup>st</sup> Semester Course	2 <sup>nd</sup> Semester Course	
100	1	2	3
200	2	3	5
300	3	4	7
400	3	3	6
<b>Total</b>	9	12	21



**(b) 100 Level First Semester**

Course Code	Course Title	Credit Unit(s)	Status
EDU 111	Introduction to Foundations of Education	2	C
<b>Total Credit Units – Compulsory</b>		<b>2</b>	<b>C</b>

**(c) 100 Level Second Semester**

Course Code	Course Title	Credit Unit	Status
EDU 112	Professionalism in Teaching	2	C
EDU 114	History Of Education in Nigeria	2	C
<b>Total Credit Units – Compulsory</b>		<b>4</b>	<b>C</b>

**(d) 200 Level First Semester**

Course Code	Course Title	Credit Unit(s)	Status
EDU 231	Curriculum Development Theory and Practice	2	C
EDU 233	General Teaching Methods	2	C
<b>Total Credit Units – Compulsory</b>		<b>4</b>	<b>C</b>

**(e) 200 Level Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
EDU 216	Special Method II (Micro Teaching)	2	C
<b>Total Credit Units – Compulsory</b>		<b>6</b>	<b>C</b>

**(f) 300 Level First Semester**

Course Code	Course Title	Credit Unit(s)	Status
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research Methods in Education	3	C
EDU 335	Teaching Practice I	3	C
<b>Total Credit Units – Compulsory</b>		<b>8</b>	<b>C</b>

\* At the end of the semester, Direct Entry students must offer GST 203.

**(g) 300 Level Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
EDU 332	Educational Technology	2	C
EDU 302	ICT in Education	2	C
EDU 314	Comparative Education	2	C
EDU336	Post Teaching Practice Experience / Remediation	2	C
<b>Total Credit Units – Compulsory</b>		<b>8</b>	<b>C</b>

**(h) 400 Level First Semester**

Course Code	Course Title	Credit Unit(s)	Status
EDU 421	Fundamentals of Guidance and Counselling	2	C
EDU 423	Measurement and Evaluation	2	C
EDU 435	Teaching Practice II	3	C
<b>Total Credit Units – Compulsory</b>		<b>7</b>	<b>C</b>

**(i) 400 Level**

**Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU 420	Research Project	4	C
EDU 412	Principles of Educational Management	2	C
EDU 426	Special Education	2	C
<b>Total Credit Units – Compulsory</b>		<b>8</b>	<b>C</b>

**Note:** Students are to offer a minimum of one elective course of two credit units at the end of the session.

Each student would offer a maximum of 37 credit units.

**Course Content Specification**

**EDU 111: Introduction to Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

**EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teacher association, the status of teacher in Nigeria, strategies for making teaching a profession

**EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, advent of Western education in Nigeria, The early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria education 1872 – 1882, education ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, the National Curriculum Conference and the National Policy on Education.

**EDU 231: Curriculum Theory and Practice (2C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation.

**EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialisation: Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic

Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

### **EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questing, Questions in Classroom: The teacher’s questions, the pupil’s questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical Environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-Visual in Teaching, Types of Audio-visual Aids and their uses.

### **EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of Education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and

education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

**EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 314: Comparative Education (2 C)**

Scope and meaning of Education, Examination of Significant Differences and Similarities in Education Policy and Practices in Selected Societies, Problems of Educational Development in Developing Countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**EDU 321: Psychology of Learning (2 C)**

Definitions of psychology and learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – Skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application

**EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process, The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instructional, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**EDU 421: Fundamentals of Guidance and Counselling(2 C)**

Meaning, Purpose and Development of Guidance and Counselling. The services of a School Guidance Programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service: Vocational Education and Personal Social Information, Methods of obtaining and disseminating information; The Counselling Service: Nature, Purpose and Theories of Counselling; The Counsellor and the counselling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counselling: Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services: Counsellor and School Administration,

Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.



**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**EDU 302: ICT in Education (2C)**

ICT in Education Teachers' Professional Development Toolkit, Course Introduction, Understanding ICT in Education: Advancing Policy through Classroom Action and the use of Technology, Modification of Lesson Plans to Support Policy, Internet Navigation, Modification of Lesson Plans to Support Policy, National ICT Policy and its Impact on Education, Report on Policy Impact. Curriculum & Assessment: Curriculum Standards, Internet Search Engines – Advanced Searching, School Records, Classroom Records. Pedagogy: Integrating ICT to Support Didactic Teaching Methodologies, PowerPoint for Pedagogues, Strategies for Integrating ICT into Learning, Graphic Tools to Enhance Teaching and Learning. Organisation and Administration: Learning Activities for a Computer Laboratory Environment, Management of the Use of ICT in a Classroom Environment. Teacher Professional Development: Teacher Productivity Strategies, Use of ICT to Support Lifelong Learning, Safety Issues in Digital Environments.

**EDU 216: Special Method 2 (Micro Teaching)**

The course shall examine the theory and practical aspect of micro teaching. Specifically, it will expose students to meaning of micro teaching, teaching skills such as set induction skills, stimulus variation skills, questioning skills, non-verbal communication skills, use of instructional material skills and closure skills. Students are

expected to demonstrate each of the skills under supervision of micro teaching lecturer.

### **EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice
- The lesson notes used during the teaching practice
- Assessment questions as well as the marking guides used
- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the study centre Director for:

- Evaluation
- Feedback, and
- Remediation.

The result of the overall processes should be communicated to the student from the Dean through the study centre Director.

#### 4.10.1 : Degree Award Requirements

**Table 3: B.Sc.(Ed) Business Education**

(a) Year I		First Semester		
S/N	Course Code	Course Title	Credit Unit	Status
1	GST 101	Use of English and Communication Skills 1	2	C
2	GST 105	History and Philosophy of Science	2	C
3	GST 107	The Good Study Guide	2	C
4	CIT 101	Computer in Society	2	C
5	EDU 111	Foundations of Education	2	C
6	BED 111	Keyboarding	2	C
7	BED 113	Fundamentals of Business Education	2	C
8	VTE 115	Introduction to Vocational Education	2	C
9	ECO 121	Principles of Economics 1	2	C
10	SMS 101	Business Mathematics I	2	C
11	SMS 105	Elements of Management I	2	C
GST courses			6	
Core Courses (Educ & Specialisation Area)			14	
Total =			20	
<b>Maximum Credit Load for Semester</b>			<b>24</b>	

**(b) Second Semester**

S/ N	Course code	Course Title	Credit Unit	Stat us
1	GST 102	Use of English and Communication Skills 2	2	C
2	EDU 112	Professionalism in Teaching	2	C
3	EDU 114	History of Education in Nigeria	2	C
4	BED 112	Word Processing	2	C
5	BED 114	Business Methods	2	C
6	ECO 122	Principles of Economics II	2	C
7	SMS 102	Business Mathematics II	2	C
8	SMS 106	Elements of Management II	2	C
9	MKT 108	Introduction to Marketing	2	C
GST courses			2	
Core Courses (Educ. & Specialisation area)			16	
Total =			18	
<b>Maximum Credit Load for Semester</b>				
<b>24</b>				

**(c) Year II**

**First Semester**

s/ N	Course code	Course Title	Cred it Unit	Stat us
1	GST 203	Introduction to Philosophy and Logic	2	C
2	EDU 231	Curriculum Developmental Theory and Practice	2	C
3	EDU 233	General Teaching Methods	2	C
4	SMS 207	Business Communication	2	C
5	ACC 201	Principles of Taxation	2	C
6	ECO 231	Micro Economic Theory I	2	C
7	ENT 205	Entrepreneurial Marketing	2	C

8	SMS 201	Business Statistics I	2	C
9	SMS 203	Introduction to Financial Accounting I	2	C
10	SMS 205	Introduction to Business	2	C
11	SMS 209	Introduction to Finance	2	C
GST courses			2	
Core Courses (Educ & Specialisation area)			20	
Total =			22	
<b>Maximum Credit Load for Semester</b>			<b>24</b>	

(d)

**Second Semester**

S/ N	Course Code	Course Title	Credit Unit	Sta tus
1	GST 202	Fundamentals of Peace Studies and Conflict Resolutions	2	C
2	EDU 212	Sociology of Education	2	C
3	EDU 214	Philosophy of Education	2	C
4	EDU 216	Micro Teaching (Special Teaching Methods and School Visit)	2	C
5	EDU 282	Business Education Teaching Methods	2	C
6	BED 212	Fundamentals of Data Processing	2	C
7	BED 214	Computer Application in Business	2	C
8	ACC 210	Auditing	2	C
9	ECO 232	Micro Economic Theory II	2	C
1 0	SMS 202	Business Statistics II	2	C
1 1	SMS 204	Introduction to Financial Accounting II	2	C

S/ N	Course Code	Course Title	Credit Unit	Sta tus
1 2	SMS 206	Introduction to Cost and Management Accounting	2	C
GST courses		2		
Core Courses (Educ & Specialisation area)		22		
Total =		24		
<b>Maximum Credit Load for Semester</b>			<b>24</b>	

**(e) Year III**

**First Semester**

S/ N	Cours e Code	Course Title	Cre dit Unit	Stat us
1	GST 301	Entrepreneurship Studies	2	C
2	EDU 321	Psychology of Learning	2	C
3	EDU 323	Research Methods and Statistics in Education	3	C
4	EDU 335	Teaching Practice I	3	C
5	BED 313	Office Information Technology	2	C
6	ACC 305	Cost Accounting	2	C
7	BHM 307	Business Law	2	C
8	ACC 311	Intermediate Financial Accounting I	2	C
9	ACC 313	Management Accounting	2	C
10	ENT 323	Entrepreneurial Development & Small Business Management	2	C
11	ENT 325	Human Resources Management Principles	2	C
GST courses		2		
Core Courses (Educ & Specialisation area)		22		
Total =		24		

<b>Maximum Credit Load for Semester</b>	<b>24</b>
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**(f) Second Semester**

S/N	Course code	Course Title	Credit Unit	Status
1	EDU 302	ICT in Education	2	C
2	EDU 332	Educational Technology	2	C
3	EDU 314	Comparative Education	2	C
4	EDU 336	Post Teaching Practice Evaluation/Remediation	2	C
5	BED 312	Organisation and Administration of Vocational Education	2	C
6	BED 314	SIWES I	3	C
7	ACC 310	Elements of Public Sector Accounting	2	C
8	ACC 312	Intermediate Financial Accounting II	2	C
9	ACC 318	Advanced Taxation	2	C
GST courses			0	
Core Courses (Educ & Specialisation area)			19	
Total =			19	
<b>Maximum Credit Load for Semester</b>			<b>24</b>	

**(g) Year IV First Semester**

S/N	Course Code	Course Title	Credit Unit	Status
1	EDU 421	Guidance and Counselling	2	C
2	EDU 423	Measurement and Evaluation	2	C
3	EDU	Teaching Practice II	3	C

	435			
4	ENT 407	Entrepreneurship Development	2	C
5	BED 413	SIWES II	3	C
6	ACC 415	Financial Management	2	C
7	BUS 401	Management Information System	2	C
8	ENT 431	Marketing Ethics & Social Responsibility	2	C
9	HCM 433	Management and Organisational Behaviour	2	C
GST courses			0	
Core Courses (Educ & Specialisation area)			20	
Total =			20	
<b>Maximum Credit Load for Semester</b>			<b>24</b>	

(h)

**Second Semester**

S/ N	Course Code	Course Title	Credit Unit	Stat us
1	EDU 412	Educational Management	2	C
2	EDU 420	Research Project	4	C
3	EDU 426	Special Education	2	C
4	BED 412	Seminar in Business Education	2	C
5	VTE 414	Vocational Guidance	2	C
6	BED 416	Office Organisation and Management	2	C
7	BFN 402	Marketing of Financial Services	2	C
GST courses			0	
Core Courses (Educ & Specialisation area)			16	
Total =			16	
<b>Maximum Credit Load for Semester</b>			<b>24</b>	



## For B.Sc. (Ed) Business Education

- For a four year education degree course, a minimum of 136 units should be required for graduation **excluding** GST credit units and the student **must** pass all core courses.
- For a direct three year course, a minimum of 120 units should be required for graduation **excluding** GST credit units and the student **must** pass all core courses.
- At the commencement of the programme, each student should be furnished with the information specifying the requirements for the award of the degree; and
- The student **must** pass all core and GST courses offered during the duration of study.

## Course Description

### **GST 101: Use of English and Communication Skills I2 Credit Units**

Listening Enabling Skills, Listening and Comprehending, Note taking, Information Retrieval including Data, Figures, Diagrams and Charts. Listening for Main Idea, Interpretation and Critical Evaluation. Effective Reading, Skimming and Scanning, Reading and Comprehending at Varying Speed Levels, Reading for Vocabulary Development in Various Academic Contexts. Reading Diverse Texts; Narratives and Expository Texts. Reading and Comprehending Passages with Tables, Scientific Texts, Reading for Interpretation and Critical Evaluation.

### **GST 105: History and Philosophy of Science 2 Credit Units**

Nature of Science, Scientific Methods and Theories, Laws of Nature, History of Science; Origin of Western Science in Ancient Times, Science in the Middle Ages of Europe, Rise of Modern Science, Twentieth Century Scientific Revolution. Lost Sciences of Africa, Science, Technology and Inventions, Nature and Scope of Philosophy of Science, Man; His Nature and Origin, Cosmic Environment and Natural Resources, Great Scientists of Nigerian Origin.

**GST 107: The Good Study Guide 2 credit Units**

Getting Started: How to use the book, Why read about study skills, Getting yourself organized, What is studying all about, Reading and Note-taking: Introduction, Reactions to reading, Your reading strategy, Memory, Taking notes. Other ways of studying: Introduction, Learning in groups, Talks and lectures, Learning from T.V. and Radio broadcasts, Other study media. Working with numbers: Getting to know numbers, Describing the world, Describing the tables, Describing with diagrams and graphs, What is good writing? The importance of writing, What does an essay look like, What is a good essay. How to write essays; Introduction, The craft of writing, The advantages of treating essay writing as a craft, Making your essay flow, Making a convincing case, The experience of writing. Preparing for examination.

**CIT 101: Computers in Society (2 Credit Units)**

What is Computer, Elements of a Computer: Hardware and Software, How to Work with a Computer, Operating Systems, and Files. Word Processing: Introduction to Word Processing, Word Processing Program Facilities, Copying text, Saving Changes, and Formatting. Spreadsheet: Entering and Correcting Data, Using Formula, Numeric Formats, Creating Charts, Charts from Non-adjacent Data, Embedded Charts, Charts Links and Chart Types. PowerPoint and Presentations: Presentation Screen, Creating New Presentations, Naming Presentations, Saving Presentations and Formatting Slides, Using Auto-shapes. Networking, Internet and Electronic mail.

**EDU 111 Foundations of Education 2 Credit Units C**

Philosophical and Psychological Perspective. Philosophy of Education. Meaning and Relevance. Equality of Educational Opportunity. Psychology of Education. Introduction to Learning Theories. Readiness to Learning, Motivation and its Relation to Learning. Transfer of Learning. Historical and Sociological Perspective. Concept and Nature of Education. Types of Education. The Growth of Education in Nigeria. Educational trends in Nigeria. Innovations in Education. The Status of Teachers in Nigeria. Education and Society. Social Class and Educational opportunity. Factors that influence Education.

**BED 111      Keyboarding 2 Credit Units**

Introduction, Touch Keying and Skill Building on Alphabetic Keyboard, Touch Keying and Skill Building on Numeric Keyboard, Speed and Accuracy Practice. Page Setup, Line Spacing, Use of White Space.

**BED 115      Introduction to Vocational Education      2 Credit Units C**

The conceptual issues and historical development of vocational education in Nigeria. These include meaning, purpose, goals, values, image and objectives of vocational education as well as the historical trends in the development of vocational education in Nigeria.

**BED 113      Fundamentals of Business Education (2 Credit Units C)**

Background and development of occupational education programme. Business Education: an overview, historical development of business education. The apprenticeship system of training the office workers. The development of private proprietary, business school, independent business academy. The three subjects curriculum, industrials revolution and the expansion of business and office occupations.

**ECO 121      Principles of Economics I      Credit Unit 2**

This course is basically an introductory course on the micro-economics aspect of economic theory. Topics covered include the subject matter of economics and basic economic problems; market mechanism, including demand, supply and price determination; theories of consumer behavior; theory of production; theory of the firm, cost of production, pricing and output under perfect competition, monopoly, monopolistic competition and oligopoly among others.

**SMS 101:      Business Mathematics I      2 Credit Units**

Mathematical concept in management; Basic principles of Algebra; Introductory Differential Calculus; Simple and Compound interest computations; Permutations & Combinations; Set theory; Factors and Exponents; Logarithms; Equation and inequalities; Arithmetic Series;

Arithmetic Progressions; Coordinate Geometry; Matrix Algebra and Applications

**SMS 105: Elements of Management I 2 Credit Units**

The objectives of the course are to explain the nature of management principles, list the functions of management, describe what a manager would do to be successful, explain the various approaches to management, highlight the major contributors of management scholars and practice to the development of management, describe the exercise of authority in the practice of management and demonstrate the importance of communication to the art of managing.

The course contents include nature of management principles, roles and responsibilities of management, social responsibility of the manager, how to be a successful manager, management by objective, history of management, schools of thought on management Part I and II, contributors to management theories, delegation of authority Parts I and II, authority nature and types of power, authority methods of influence and application in organisation as well as communication.

**GST 102: Use of English and Communication Skills II 2 Credit Unit**

Writing Paragraphs; Topic Sentence and Coherence, Development of Paragraphs; Illustration, Description, Cause and Effect, Definitions. Formal Letters; Stylistic Forms, Essential Parts, Complaints and Requests, Letters about Jobs, Ordering Goods, Letters to Government and Other Organisations. Writing Reports; Reporting Events and Experiments. Writing Summaries; Techniques of Summarising. Letters and Sounds in English, Vowels and Consonants, Interviews, Seminar Presentation, Public Speech Making, Articles, Concord and Sentences, Tenses, Gerunds and Participles, Active, Passive and the Infinitive, Modal Auxiliaries.

**EDU 112 Professionalism in Teaching (2 Credit Units C)**

Concepts and Issues in Teaching. Concepts of Teaching and Professionalism. History of Teaching in Nigeria. Professional Growth of Teachers. Educating the Educators. Professional Studies Programs for Teachers. The Teacher and the Child. Why Teachers should care.

The making of Ideal Teacher. Qualities of an ideal teacher. The Role of the Teacher. The Nigerian Union of Teachers (NUT). The Role of Parent Teachers Association (PTA). The Subject Teacher Association. The Status of Teacher in Nigeria. Strategies for making Teaching a Profession

**EDU 114 History of Education in Nigeria (2 Credit Units C)**

Nigeria Traditional Education, Higher Education in Traditional Society, Islamic Education in Nigeria, Advent of Western Education in Nigeria, The Early Missionaries and the Development of Education in Nigeria, Colonial Government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, The Impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

**BED 112: Word Processing (2 Credit Units)**

Page Setup, Line Spacing, Use of White Space, Page Numbering, Headers and Footers. Templates, Document View, Line and Page Break, Print, Manuscript, Simple Editing, Paragraphs, Headings, Formatting/Other Functions, letter, tabulations, speech, symbols, minutes of meeting, and any new form of word processing should be incorporated at the time of teaching.

**BED 113: Business Methods (2 Credit Units)**

Business plan, Business Structure, Quantitative methods in Business, Management and control of business.

**ECO 122 Principles of Economics II (2 Credit Units)**

This course which focuses on microeconomic theory is a continuation of ECO 101, topics covered include the field of macroeconomics; national income accounting; money and banking; components of gross domestic product; aggregate demand and aggregate supply analysis; Government and the Economy; Open Economy Macroeconomics.

**SMS 102: Business Mathematics II (2 Credit Units)**

Mathematical concept in management; Basic principles of Algebra; Introductory Differential Calculus; Simple and Compound interest computations; Permutations & Combinations; Set theory; Factors and Exponents; Logarithms; Equation and inequalities; Arithmetic Series; Arithmetic Progressions; Coordinate Geometry; Matrix Algebra and Applications.

**SMS 106 Elements of Management II (2 Credit Units)**

The course contents include nature of management principles, roles and responsibilities of management, social responsibility of the manager, how to be a successful manager, management by objective, history of management, schools of thought on management Part I and II, contributors to management theories, delegation of authority Parts I and II, authority nature and types of power, authority methods of influence and application in organisation as well as communication.

**MKT 108: Introduction to Marketing (2 Credit Units)**

Definition of Marketing; Fundamental concepts in marketing; marketing evolution and phrases; the role and importance of marketing; functions of marketing; products and their categorisation; marketing environment; features of industrial and consumer goods; the role of middlemen and outlets types in Nigeria; problems of distributive trade in Nigeria; the marketing mix; product differentiation and market segment; branding, packaging and labeling; price theory and price problems; marketing promotion – promotional mix; marketing information – marketing research and intelligence.

**BFN104: Elements of Banking (2 Credit Units)**

The business of banking, the development of money, historical development of banking, the central bank of Nigeria, the Nigeria banking structure, savings and investment, the Nigerian money market, bank's balance sheet, organisational structure of clearing bank, bills of exchange cheques, methods of payment through the banking system, bank, lending, interpreting the accounts of customers and the banker's institute (the Chartered Institute of Bankers of Nigeria (CIBN)).

**GST 203: Introduction to Philosophy and Logic (2 Credit Units)**

Definition and Scope of Philosophy, Philosophy as the Parent Discipline, Branches of Philosophy, Philosophy and Other Disciplines, Sources of Knowledge and Criteria for Knowing. Definition and Scope of Logic, Logic's Vocabulary, Valid, Invalid, Deductive and Inductive Arguments, Language and its Functions. Fallacies, Definitions, Categorical Propositions, Syllogisms, Symbolising in Logic, Truth Table Analysis, Logical Proofs of Validity Using Truth Tables, Rules of Inference and Argument Forms, Laws of Thought.

**EDU 231 Curriculum Theory and Practice (2 Credit Units C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – Oriented Evaluation, Selection – Oriented Evaluation

**EDU 233      General Teaching Methods (2 Credit Units C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questioning, Questions in Classroom: The teacher’s questions, the pupil’s questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-visual in teaching, Types of Audio-visual Aids and their uses.

**BED 211:      Business Communication      2 Credit Units**

Communication environment and foundations, writing, planning and dictating, communication through letters, communication through memoranda and reports, communication about employment, and oral communication and communication management.



**ACC 201: Principles of Taxation 2 Credit Units**

This course covers areas such as Historical and Legal Background of Taxation in Nigeria, Tax Administration in Nigeria, Taxation of Income Vs Taxation of Capital (the Difference between Taxation of Income and the Taxation of Capital), Basis of Assessment of Profits of Businesses (Basis Period) and Loss Relief. Others are Capital Allowances, Taxation of Employees and Sole Trader, Partnership Taxation, Companies Taxation, Taxation of Settlement, Trust and Estate, Taxation of Banks, Taxation of Insurance Companies, Taxation of Construction Companies, Taxation of Airline and Shipping Companies. Lastly, issues on Double Taxation Relief are also discussed.

**ECO 231 Micro Economic Theory I (2 Credit Units)**

This course builds on the foundation of ECO102. Topics covered include: theory of consumer behavior; utility approach and indifference curve approach. Topics in consumer demand: market structures, output and pricing under various market structures-perfect competition, monopoly, monopolistic competition and oligopoly; the theory of distribution under perfect competition; input pricing and employment under imperfect competition.

**ENT 205: Consumer Behaviour (2 Credit Units)**

*As in the Faculty of Management Sciences.*

**SMS 201: Business Statistics I (2 Credit Units)**

The course contents include statistics and decision making process, data (its nature, source and methods of collection), summarising data, graphical presentation of data, measure of central tendency (arithmetic mean, geometric means and harmonic mean, median and mode), fractiles, skewness and kurtosis, measures of dispersion, set theory, permutations and combinations, some elementary probability concepts, probability rule, events and BA theorem, probability distribution of a discrete random variable, binomial distribution, Poisson distribution, the hyper-geometric distribution and normal distribution.

### **SMS 203: Introduction to Financial Accounting I (2 Credit Units)**

The aim of this course is to introduce learners to the basic principles of accounting concepts and conventions, demonstrate how the two ledger accounts involved in a business transactions can be identified, outline the importance of accounting, determine the net profit or loss of a business at the end of the business period and show the financial statement of business concern as at a particular period.

The course contents include definition and objectives of book keeping, accounting, accountancy and importance of account, principles of accounting concepts and conventions, double entry system of accounting, the ledger, trial balance I (meaning and methods) and II (errors), control accounts, journal (meaning, specimen and types of a journal, uses of journal, primary and secondary uses), rectification of errors on journal, subsidiary book – purchase, sales, cash book, bank and cheques.

### **SMS 205: Introduction to Business (2 Credit Units)**

Concept, planning and background of the word business; definition of profit and its importance; types of business organisations in terms of the ownership structures; business organisational structures; activities of a business in terms of various organic and auxiliary functions of a business; meaning, types and policy issues in business environment; legal issues and solution in business environment: sales of goods, law of contract, business law; role of government in business; role of international organisations; industrialisation and development; social responsibility of business system; business ethics.

### **SMS 209: Introduction to Finance (2 Credit Units)**

*As in the Faculty of Management Sciences.*

### **GST 202: Fundamentals of Peace Studies & Conflict Resolutions**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between

Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

**EDU 212: Sociology of Education (2 Credit Units C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialisation:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

**EDU 214: Philosophy of Education (2 Credit Units C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Logic and education; Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

**EDU 282: Business Education Methods (3 Credit Units C)**

Concept of business studies, underlying theory to teaching method, good teaching method, teacher centred method, centred method, individualised teaching method, use of audio visual aids, teaching keyboarding, teaching accounting, teaching management, teaching marketing, teaching human relations, planning to teach, lesson development.

**BED 212: Fundamentals of Data Processing (2 Credit Units C)**

Problem identification, types, design, data gathering, processing, analysing, interpreting and reporting in educational context. The use of statistics and computer as tools in educational research should be emphasised.

**BED 214: Computer Application in Business (2 Credit Units C)**

Business oriented software programmes e.g. automated accounting, payroll inventory, office procedure; the use of the various programmes in solving business-related problems; Information management, internet buying and selling techniques, communication and any new form of the use of computer in business.

**ACC 210: Auditing (2 Credit Units (C))**

To enable learners understand the system and techniques of audit and their applications.

Definition of auditing, concept and object of audit of financial statement, nature and origin of audit, qualities of a good auditor; types of audit – types of errors and frauds of audit stating their advantages and disadvantages, relationship between forms of audit – internal and statutory audits; skill of audit and audit report writing, initial audit programme, audit notes and methods of work ,distinguish between internal control and internal check techniques, audit of cash transaction, audit of trading transactions, audit ledgers accounts, verification and valuation of assets and liabilities, preparation of accounts such as – Income and expenditure, trading profit and loss manufacturing, Balance sheet. Explanation on depreciation, reserve

and provisions; difference between cooperative audit and other business organisations audit, features of cooperative audit, audit of different types of cooperative societies. Implication of audit report – meaning of audit report, concept of true and fair reports. Analysing audit reports and comments, responsibility of auditor and his/her independence as a verifier of financial information, legal position and liability of auditors, importance of the auditor in a business organisation; responsibility of the Board of Directors, management and their relationship with the auditors.

**ECO 232: Micro Economic Theory II (Credit Unit 2 C)**

This course builds on the knowledge gained in ECO 201. The focus here is on the use of quantitative methods in analysing advanced macro-economics. Topics include: the theory of demand; the theory of production; cost theory, price theory, managerial theories of the firm, the behavioural theory of the firm; the notion of surplus values and profits, general equilibrium theory and welfare economics with particular reference to Nigeria.

**SMS 202: Business Statistics II (2 Credit Units C)**

*As in the Faculty of Management Sciences*

**SMS 204: Introduction to Financial Accounting II (2 Credit Units C)**

*As in the Faculty of Management Sciences*

**SMS 206: Introduction to Cost and Management Accounting (2 Credit Units E)**

*As in the Faculty of Management Sciences*

**ENT 224 Business Ethics (2 Credit Units E)**

*As in the Faculty of Management Sciences*

**GST 301: Entrepreneurship Studies (2 Credit Units C)**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

**EDU 321: Psychology of Learning (2 Credit Units C)**

Definitions of psychology & learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application.

**EDU 323: Basic Research Methods in Education (2 Credit Units C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and

Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 335: Teaching Practice I (2 Credit Units C)**

Students learn through practical experience how to teach particular subjects. Manage a Classroom and the Functions of a Good Teacher.

**BED 313: Office Information Technology (2 Credit Units C)**

The course includes various office services and automation, information and communication handling procedures, office functions, types of office machines as they apply to different departments in the office. Manual and electronic gadgets. The future and trends of office information technology.

**ACC 305: Cost Accounting (2 Credit Units C)**

Introduction;, definition and purpose of cost accounting; classification of cost functions; elements responsibility and behaviour – material accounting and control procedure; labour accounting, overhead cost accounting and control procedures; cost centre; cost behaviour and cost estimation – costing methods, standard costing techniques; absorption costing, marginal costing, budgeting and budgetary control and cost control.

**ACC 307: Commercial Law (2 Credit Units C)**

This course will enlighten students on the Nigerian Legal system; sources of Nigerian Law; hierarchy of Nigerian courts; commercial arbitration; Law of contracts; commercial contracts; commercial relations between persons; unfair competition; passing off and “trade libel”; sale of goods; hire purchase; carriage of goods; negotiable instruments; money lending; distinction between civil and criminal liability, partnership law; meaning of corporate personality and the doctrine of ultra vires. This course is designed to expand the knowledge of commercial law which the student would already have obtained in Business Law placing particular emphasis however on the constitution and operations of corporate entities. Topics include: types of companies; company procedure and documentation; issues and transfer of shares and debentures; meetings and resolutions; duties of

officers; provisions relating to disclosure in corporate accounts reconstruction, amalgamation and take over.

**ACC 311 : Intermediate Financial Accounting 1 (2 Credit Units C)**

Topics to be treated include topics related to published financial statements, cash flow statement and interpretation of financial statements, accounting for insurance claims and foreign branches, accounting for contract, investment, lease and hire purchase.

**ACC 313: Management Accounting (2 Credit Units C)**

*As in the Faculty of Management Sciences*

**ENT 323 Entrepreneurial Development and Small Business Management (2 Credit Units)**

*As in the Faculty of Management Sciences*

**ENT 325: Human Resources Management Principles (2 Credit Units C)**

*As in the Faculty of Management Sciences*

**ECO 323: Labour and Human Resources Economics (2 Credit Unit E)**

This course helps to acquaint the students with principles of economics as applicable in labour matters and to introduce the students to issues in industrial relations. Topics covered include: demand and supply of labour, theories of labour movement, theories of collective bargaining and industrial democracy among others.

**ENT 329: Strategic Management (2 Credit Unit E)**

*As in the Faculty of management Sciences*



**EDU 332: Introduction to Educational Technology (2 Credit Units C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process; The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instructional, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**EDU 314; Comparative Education (2 Credit Units C)**

Scope and Meaning of Education, Examination of Significant Differences and Similarities in Education Policy and Practices in Selected Societies, Problems of Educational Development in Developing Countries.

**EDU 336: Post Teaching Practice Evaluation/Remediation (2 Credit Units C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

1. Challenges encountered during the teaching practice;
2. The lesson notes used during the teaching practice;
3. Assessment questions as well as the marking guides used;
4. Assessment of teaching practice supervision by the supervisor; and
5. Suggestions for improvement.

The report should be submitted by the student to the Dean through the Study Centre Director for:

- a. Evaluation;
- b. Feedback; and
- c. Remediation.

The result of the overall processes should be communicated to the student from the Dean through the Study Centre Director.

**BED 312: Organisation and Administration of Vocational Education (2 Credit Units C)**

This course covers the following: the structure and methods of organising vocational education in Nigeria levels of organisation; national, local and institutional; agencies connected with organisation of business education (NBTE, NCCE, NUC, NERDC, etc) business teacher preparation and levels organisation of infrastructural and instructional resources, safety measures and administration of records.

**BED 314: Industrial Work Experience/SIWES (2 Credit Units C)**

Students should have practical experience in the industry in the area relevant to their course of study for a period of six month. Students should be supervised and graded to ensure compliance. Supervision and monitoring will be organised by the university SIWES Directorate.

**ACC 310: Elements of Public Sector Accounting (2 Credit Units C)**

Constitutional and regulatory framework of public sector accounting, Government accounting concepts and pronouncements, Sources of government revenue, Financial management cycle in federal, states and local government, Accounting for public sector organisations, authorities, parastatals, boards, corporations, agencies and tertiary educational institutions, public finance.

**ACC 312 : Intermediate Financial Accounting II (2 Credits Units C)**

Topics to be treated in this course include topics relating to special businesses and accounting standards, accounting for petroleum activities and financial institutions, financial reporting and regulatory framework.

**ACC 318: Advanced Taxation (2 Credits Units C)**

Tax practice and administration, Individual assessment, trust settlements, withholding tax, VAT and estates, Capital Gains Tax, Corporate taxation including taxation of income, pioneer activities and double taxation relief, Petroleum profit tax, Stamp duty including transfers between associated companies and reconstruction/amalgamation relief.

**ENT 322: Principles and Practice of International Trade**

*As in the Faculty of Management Sciences*

**ENT 330: Business Forecasting**

*As in the Faculty of Management Sciences*

**EDU 421: Fundamentals of Guidance and Counselling (2 Credit Units C)**

Meaning, Purpose and Development of Guidance and Counselling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counselling Service: Nature, Purpose and Theories of Counselling; The Counsellor and the counselling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counselling: Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services: Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 423: Measurement and Evaluation (2 Credit Units C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 435: Teaching Practice II (3 Credit Units C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**ENT 407: Entrepreneurship Development (2 Credit Units C)**

*As in the Faculty of Management Sciences*

**BED 411: Seminar in Business Education (2 Credit Units C)**

**ACC 415: Financial Management (2 Credit Units C)**

Nature and scope of strategic management, Corporate strategy, information and financial management, Capital investment decisions, Financing capital structure and dividend policy decisions, Capital market financing and risk management, Working capital management, Corporate restructuring, mergers and acquisition, Financial management of small and medium scale enterprise, International financial management.

**BUS 401: Management Information System (2 Credit Units C)**

Introduction to, and Fundamentals of Data Processing –brief history and conventional data processing methods; Manual methods and mechanised methods. Classification of systems and their relative merits. Closed loop and open loop systems: effect on time-lag; the total system approach and objectives; total systems and subsystems. Data processing and Management Information Systems (MIS). The organisation of MIS including the use of mechanical and electronic accounting machines, flow charting and the principles of systems design and documentation. Managerial uses of the information output as a basis for developing criteria and systems. Information needs of management and design of MIS. Computer and Data Processing – evolution of the Computer and the Computer system Input, output and central processing unit. Hardware and Software, Introduction to common Computer Programming languages used in business (COBOL, FORTRAN, SPSS etc.) Electronic, Data Processing (EDP) methods; batch processing, real-time processing and the management of EDP. Business Systems hierarchical structure of Organisations; the sub-optimisation issue.

**ENT 431: Marketing Ethics and Social Responsibility (2 Credit Units C)**

*As in the Faculty of Management Sciences*

**HCM 433: Management and Organisational Behaviour**

*As in the Faculty of Management Sciences*

**EDU 412: Principles Educational Management (2 Credit Units C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and

welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 420: Research Project (4 Credit Units C)**

An Application of the Research Methods and Data Processing Course to a Field Experience under the Guidance of a Selected Supervisor who specialises in Business Education.

**EDU 426: Special Education (2 Credit Units C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**BED 412: Office Organisation and Management (2 Credit Units C)**

Data entry for processing forms; inventory, checkbook and record management; sorting routines; Filing, payroll processing; interest calculations; customer billing; travel; mailing and shipping; telecommunications, Organisation and planning of office systems, leadership and human relations, controlling operations and processing of information.

**BED 422: Vocational Guidance (2 Credit Units C)**  
**BFN 402: Marketing of Finance Services (2 Credit Units C)**

*As in the Faculty of Management Sciences*

**ECO 446: International Trade and Finance II (2 Credit Units E)**

The course provides a sort of intermediate treatment of the principles of international finance. It covers topics such as: the documents of international finance, international payments, foreign exchange markets, balance of payment and its adjustment mechanisms, transfer movement, capital movements, international reserves, the international monetary system, Euro-dollar and the Euro- currency markets.

**ENT 424: Feasibility Studies and Business Proposals (2 Credit Units E)**

Sources of information for feasibility studies; generating data for feasibility studies; business description; choice of business location; technical analysis; management plan for operations; marketing strategy; marketing analysis; financial analysis; plan implementation; financing plan (sources of funds etc); writing business proposals; writing a loan proposal.

**Table 4: B.A. (Ed) English Language (4209)**

**(a)100 Level**

**First Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 101	Use of English and Communication Skills I	2	C
GST 105	History and Philosophy of Science	2	C
GST 107	The Good Study Guide	2	C
EDU 111	Foundations of Education	2	C
CIT 101	Computers in Society	2	C
ENG 121	The Structure of Modern English I	2	C
ENG 113	Intro. to Nigerian Literature I	2	C
ENG 111	Introduction to Literature and	3	C

	Literary Criticism		
ENG 141	Spoken English	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	6	
	Core Courses (Educ and Specialisation Area)	14	
		20	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**(b) Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 102	Use of English and Communication Skills II	2	C
EDU 112	Professionalism in Teaching	2	C
EDU 114	History of Education in Nigeria	2	C
ENG 122	The Structure of Modern English II	2	C
ENG 114	Intro. to Nigerian literature II	2	C
ENG 162	Elements of Drama	2	C
ENG 172	Intro. to Poetry	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	2	
	Core Courses (Educ. and Specialisation Area)	13	
		15	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**(c) 200 Level**

**First Semester**

Course Code	Course Title	Credit Unit	Status
GST 203	Introduction. to Philosophy and Logic	2	C
EDU 231	Curriculum development theory and practice	2	C
EDU 233	General Teaching Methods	2	C
ENG 221	Intro. to Syntactic models	2	C
ENG 223	Advanced English Composition I	2	C
ENG 241	Introduction to phonetics &	3	C



	phonology of English		
ENG 281	The African Novel	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	2	
	Core Courses (Educ and Specialisation Area)	14	
		16	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**(d) 200 Level Second Semester**

Course Code	Course Title	Credit Unit	Status
GST 202	Fundamentals of Peace & Conflict Resolution	2	C
EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
EDU 216	Special Methods (Micro Teaching/School Visit)	2	C
EDU 220	English Methods	2	C
ENG 222	Advanced English Syntax II	2	C
ENG 224	Advanced English Composition II	2	C
ENG 226	English Morphology	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	2	
	Core Courses (Educ and Specialisation Area)	15	
		17	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**(e) 300 Level First Semester**

Course Code	Course Title	Credit Unit	Status
GST 301	Entrepreneurship Studies	2	C
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research methods in Education	2	C
EDU 335	Teaching Practice I	3	C
ENG 331	Intro. To Semantics	3	C

ENG 341	The Phonology of English	3	C
ENG 353	The English Language in Nigeria	3	C
ENG 381	The English Novel	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	2	
	Core Courses (Educ and Specialisation Area)	21	
		23	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**(f) 300 Level Second Semester**

Course Code	Course Title	Credit Unit	Status
EDU 302	ICT in Education	2	C
EDU 332	Intro. To Educational Technology	2	C
EDU 314	Comparative Education	2	C
EDU 336	Post Teaching Practice Evaluation & Remediation	2	C
ENG 352	Discourse Analysis	3	C
ENG 316	English Poetry	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	0	
	Core Courses (Educ and Specialisation Area)	14	
		14	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**(g) 400 Level First Semester**

Course Code	Course Title	Credit Unit	Status
EDU 421	Guidance & Counselling	2	C
EDU 423	Measurement & Evaluation	2	C
EDU 435	Teaching Practice II	3	C
ENG 421	New Trends in Syntax	3	C
ENG 415	Literary Theory and Criticism	3	C
ENG 411	English for Specific purposes	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	0	

	Core Courses (Educ and Specialisation Area)	16	
	<b>Sub-Total =</b>	<b>16</b>	
	<b>Maximum Credit Unit</b>	<b>24</b>	

**(h) 400 Level Second semester**

Course Code	Course Title	Credit Unit	Status
EDU 412	Educational Management	2	C
EDU 420	Research Project	4	C
EDU 426	Special Education	2	C
ENG 434	Literary Stylistics	3	C
ENG 454	Multilingualism	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	0	
	Core Courses (Educ and Specialisation Area)	14	
	<b>Sub-Total =</b>	<b>14</b>	
	<b>Maximum Credit Unit</b>	<b>24</b>	

\*To be awarded a degree in B.A. Ed. English/French programme, a student would have to pass a minimum of 120 and 90 credit units for the four year and three year programmes respectively.

### Degree Award Requirements

- For a four year education degree course, a minimum of 120 units should be required for graduation.
- For a direct three year course, a minimum of 90 units should be required for graduation.
- The student must pass all core and GST courses offered during the duration of study.

### Course Content Specification

#### **GST 101: Use of English and Communication Skills I (2 C)**

Listening enabling skills, listening and comprehending comprehension, note taking and information retrieval. Including data,

figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

**GST 102: Use of English and Communication Skills II (2C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

**GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature and his origin, man, environment and resources, Great Nigerian Scientists.

**GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organised, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks and lectures, learning from T.V and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay, conclusion. How to write essays: Introduction, the craft of

writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

### **EDU 111: Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

### **EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession

### **EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on

**CIT 101: Computers in Society (2 E)**

Overview of the discipline of Computer Science; General structure of a computer system; Historical development of computer systems; Generations of computer system; Computer operations; Internal structure of a computer hardware; Microcomputer technology; Computer numbering system; computer arithmetic; computer data representation schemes; Problem solving with computers Elements of programming languages. Computers in the Society internet and its facilities. Basic file processing concepts. Introduction to computer programming using VISUAL BASIC programming language; Algorithms, Data Structures and Logic; Laboratory exercises in VISUAL BASIC programming and the internet.

**CIT 102: Software Application Skills (E)**

Brief description of computer system: CPU, I/O devices; Operating systems; Computer File Management; Computer Software: overview, types, etc.; Application software: common application software; Using Microsoft Word; Using Microsoft Excel; Features of Database Applications and Microsoft Access; Statistical Analysis Applications; Using SPSS software; Introduction to Desktop Publishing applications; Computer applications in Nursing; Computer applications in Agriculture; Managing the computer system with the Control Panel.

**ENG 121: The Structure of Modern English I (2 C)**

General introduction to the structure of English: phonological, syntactic and morphological levels; basic sentence phrase structures, clause types and inter – sentential relations, etc

**ENG 122: The Structure of Modern English II (2 C)**

Construction of different types of sentences; correct use of tenses, agreement between subject and verb, in the context of compound and complex sentences. Organisation and development of types.

**ENG 113: Introduction to Nigerian Literature I (2 C)**

Introduction to the Traditional form: Introduction to the traditional forms – Myth, Legend, Folktales, Folk drama, Folk poetry, Folk song. The traditional form as background to Nigerian literature: From the

pre-historical to myth to legend to folk Epic to Saga, Influence of Nigerian belief systems on evolving literature – universal God, intermediary gods, personal gods, Folk tales, Fables, Plants, Animals and types as characters, Thoughts and philosophies. Colonialism, Literacy and the Evolution of Nigerian literature: Colonial contempt and the writings of Joyce Cary and Joseph Conrad, The incipient traditional form – Form Oracy to Literacy, Literature, drama and Theatre in Nigeria, Typical Nigerian Plays, Iwe Iroyin, Onitsha Market Literature and the Growth of the Nigerian Novel.

**ENG 114: Introduction to Nigerian Literature II (2C)**

Emerging trends in Nigerian literature: Socio-political underpinnings in Nigerian literature, The female writer and feminism in Nigerian Literature, Feminism and Womanism in Nigerian literature. Generation shifts in Nigerian literature (Drama and Fiction): From first to second generation playwrights, Second generation cotemporary novelists and their thematic concerns, Contemporary drama, Generation shifts in Nigerian literature (Poetry): Traditional poetry, pioneer poets – Dennis Osadebey, etc Second generation Nigerian poets, contemporary Nigerian poets, Theories. Qualities and contributions of Nigerian literature to World literature: Critical Theories and Theorist in Nigerian literature, Qualities and contributions of Nigerian literature to World literature, Recognitions and awards, which the Nigerian literature has earned, Recognitions and awards – Text, Contest and Context.

**ENG 111: Introduction to Literature and Literary Criticism (3 C)**

General introduction to literature; nature, forms, elements, functions and techniques of literature; study of the basic principles and methods of literary criticism. Texts representing the three major genres-poetry, drama, and prose fiction will be used for illustration and practice.

**ENG 141: Spoken English (3 C)**

Fundamental concepts and definitions: Speech in human communication, The English sound systems, Introduction to phonetic transcription, The human organs of speech; the English consonant and

vowel: Parameters for classification, detailed description; The syllable and stress, Syllable, Word stress, emphatic and sentence stress, Problems in phonemic analysis; Intonation: Definitions and Functions, Patterns. Audio presentation of illustrations will be included.

**ENG 162: Elements of Drama (2 C)**

Nature of drama; its various elements, forms and artistic features. Selected African and non – African plays are studied in detail to illustrate these, such as Soyinka’s *Trials of Brother Jero*, *Song of a Goat*, and *Sophocles’ Oedipus Rex*.

**ENG 172: Introduction to Poetry (3C)**

This course deals with the nature of poetry (definitions, elements, forms and functions) against the background of the nature of literature in general). It will also present critical appreciation of poetry (literary devices: imagery, rhetorical figures, sound devices, rhythmic devices, structural devices): and grammatical reading of poetry. There will also be an interpretation, discussion of the artistic features of selected African and non-African poems that will be used for illustration.

**ENG 181: Intro to Fiction (2C)**

As in School of Arts and Social Sciences

**LIN 111: Introduction to Linguistics I (2 C)**

Introduction to the field of linguistics; its scope and its application; examination of language from the linguistic point of view, its nature and relation to animal language, culture and society.

**LIN 112: Introduction to Linguistics II (2 C)**

Linguistic concepts such as the phoneme, distinctive features, morpheme etc; linguistic methodology, formal descriptions of language, and its various sub-specialisations such as historical, applied, and psycholinguistics

**GST 203: Introduction to Philosophy and Logic (2 C)**

Fundamentals of logic and critical thinking; types of discourse; nature of arguments; validity and soundness; techniques for evaluating



arguments; distinction between inductive and deductive inferences; etc. Illustrations from familiar texts, including literature materials, novels, law reports and newspaper publications

### **GST202: Fundamentals of Peace and Conflict Resolution (2C)**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

### **EDU 231: Curriculum Theory and Practice (3C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation

### **EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialisation:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites,

Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

**EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questing, Questions in Classroom: The teacher’s questions, the pupil’s questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-visual in teaching, Types of Audio-visual Aids and their uses.

**EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge,

Types of knowledge; Knowledge by divine revelation, By institution  
Prior knowledge, Posteriori knowledge, Need for knowledge in  
modern Nigeria morality and education (axiology) Define concepts of  
morality and education, Determinants of good education, Logic and  
education, Inductive and Deductive methods of teaching; Logic and  
curriculum planning, Logic and School Administration; Discipline;  
Freedom, Determination and Free will.

**ENG 215: Survey of English Literature I (Medieval & Renaissance) (2C)**

The major literary themes and conventions of Medieval and Renaissance English literature (excluding Elizabethan Drama and Metaphysical poetry): survey of the shifting perceptions of the universe from the middle ages through the renaissance with emphasis on the significance of Humanism and Science during the period; major conventions such as Miracle and Morality plays, Medieval and Elizabethan lyrics and essays; study of selected authors including Geoffrey Chaucer, Edmund Spenser and John Milton, etc.

**ENG 216: Survey of English Literature II (Restoration to Present) (2 E)**

The course covers the major literary genres, styles and conventions of the restoration to the present. It is a survey of the shifting perceptions of the universe from the Puritans, through the Restoration, the Victorian periods to the present in the major literary genres of each age. There will be a study of the major literary themes, styles and conventions of the periods in selected literary works and essays.

**EDU 216: Special Methods (Micro Teaching/School Visit) (2 C)**

**EDU 220: English Methods (2 C)**

An overview of English as a second language in Nigeria, language teaching methods, language subsystems and communicative skills, teaching sounds, teaching vocabulary and grammar, teaching listening, speaking, reading and writing skills, language tests, their types and functions, qualities of good language tests, discreet point tests and integrative tests, uses of language test results and lesson planning in language teaching.

**ENG 221: Introduction to Syntactic Models (2 C)**

Principles and practice of basic syntactic models such as the traditional, Structuralist, transformational-generative and systemic–functional models. English will be mainly used for illustration purposes.

**ENG 222: Advanced English Syntax (2 C)**

The systemic-functional model; an in–depth study of the syntactic structures of English based on the systemic-functional model.

**ENG 223: Advanced English Composition 1 (2 C)**

Basics of composition writing; various composition/essay types–persuasive, argumentative, expository, narrative, etc.

**ENG 224: Advanced English Composition II (2 C)**

Specialised composition writing, e.g., reports, long essays, minutes of meetings, various types of letters, invitations, public announcements, speech writing, etc. Correct language use; other technical matters connected with these kinds of writing.

**ENG 226: English Morphology (3C)**

Detailed study of word formation processes, internal structure of English word and morpheme structure: inflectional morphology, identification of lexical categories and grammatical categories: Nature and types of morpheme – affixation (derivational and processes in English: derivation, compounding, invention, clipping, acronym, blending, back formation, reduplication, etc.

**ENG 281: The African Novel (3 C)**

The African novel is a course that presents the novels as a major genre of prose fiction. It presents a detailed study of selected African novels from its beginning to the present day. It highlights the features that characterise this literary form from other genres of literature. It reflects the socio-political currents that have given the African novel its typical character and selected text from the major regions of Africa will be studied.

### **ENG 251: Language and Society (2 E)**

Language as a Social phenomenon and its functions; social factors of language use; Language varieties: Dialect, accent and sociolect; register; style; standard, non- standard, native and non-native; deviant/restricted varieties (slang, jargon, graffiti); new varieties (email, text messaging); languages in contact (pidgin and Creole); Language typologies; anthropology; language learning and language acquisition; bilingualism/multilingualism; language policy; language planning, maintenance, shift and death; discourse analysis; code switching, interference and borrowing; linguistic imperialism; sociolinguistic situation of Nigeria; sociolinguistics and other disciplines.

### **GST 301: Entrepreneurship Studies (2C)**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

### **EDU 302: ICT in Education (2C)**

An application of the principles of information and computer technology to education

### **EDU 321: Psychology of Learning (2 C)**

Definitions of psychology & learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of

learning and classroom application, S – R theory of Thorndike – skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application

**EDU 332: Introduction to Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process; The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instruction, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**EDU 323: Research Methods and Statistics in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 314: Comparative Education (2 C)**

Scope and meaning of education, examination of significant differences and similarities in education policy and practices in selected societies, problems of educational development in developing countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher

### **EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice
- The lesson notes used during the teaching practice
- Assessment questions as well as the marking guides used
- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the Study Centre Director for:

- Evaluation
- Feedback, and
- Remediation.

The result of the overall processes should be communicated to the student from the Dean through the Study Centre Director.

### **ENG 321: Contemporary English (3 E)**

English in use in English-speaking communities; attitude to usage; the notion of “correctness” versus ‘grammaticalness’; variations in use; and the problem of defining “standard English” worldwide.

### **ENG 341: The Phonology of English (3 C)**

Segmental and non – segmental phonemes of the English Language and their organisation in concrete discourse; practical exercises to improve the students’ perception and production of these sounds; various approaches to the description of English phonology (phonemic, prosodic, generative).

**ENG 331: Introduction to Semantics (3 C)**

Sense properties and sense relations; problem of word versus sentence meaning; theories of meaning; etc., situating the topics within the general framework of linguistics.

**ENG 352: Discourse Analysis (3 C)**

Introduction to the principles and practice of discourse analysis; practical analysis, study, and description of relevant textual materials.

**ENG 353: The English Language in Nigeria 3C**

The implantation and growth of English in Nigeria: advent, promotion, functions of English in Nigeria, English and sociolinguistic consequences in Nigeria; The Linguistic Features of English in Nigeria; debate on “Nigerian English”, phonological, grammatical, lexico-semantic, discourse features of English in Nigeria; Variety differentiation: Criteria, spoken varieties, written varieties, standard Nigerian English; English and Pidgin in Nigeria: Pidgins, Creoles and Broken English, evolution, functions of Nigerian Pidgin, structural differences between Nigerian Pidgin and English, English and Language Planning in Nigeria: language planning, policies in governance, Education, English and the National Language Question.

**ENG 314: Public Speaking (2 C)**

Foundations and theories of persuasion; public speaking; the audience; selecting a topic and purpose; supporting your ideas; organising the materials; preparing the delivery; and making persuasive speeches.

**ENG 372: English Poetry (3C)**

In-depth examination of the English poetry from the Romantic period to the present against its political, philosophical, and literary/aesthetic backgrounds and the relationships that informed the poetry of the various periods under study; the ideas that shaped the matter and manner of the works of the representative poets selected for study.



### **ENG 381: The English Novel (3C)**

Study of the themes and conventions of the English novel since Dafoe. Major English writers and influences on the English novel will be studied. There will also be a study of representative novels mainly from the 18<sup>th</sup> century to the modern times.

### **EDU 421: Guidance and Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counseling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counselling Service:- Nature, Purpose and Theories of Counseling; The Counsellor and the counselling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counselling: Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services: Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referral, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

### **EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting

system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioural cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

### **ENG 421: New Trends in Syntax (3C)**

Various approaches to syntactic theory. Modern grammars critically examined: Bloomfieldian taxonomic, Pike's tagmenic grammar, Chomsky's systemic/functional, transformational generative grammars, stratificational, sector analysis, and case grammars. Usefulness of each theory and application to English. Focus on theoretical issues in transformational generative syntax: ambiguity, paraphrase, recursiveness, etc. \transformational processes, relativisation, noun phrase complementation, nominalisation, etc. Pre-requisites are ENG 241 and ENG222.

### **ENG 415: Literary Theory and Criticism (3 C)**

Theory of literature in general; theories of poetry, drama and prose fiction; the nature and approaches of literary criticism, the history of English criticism with emphasis on major genres, themes and general critical principles; relate selected readings to problems in the criticism of African literature.

### **ENG 434: Literary Stylistics (3C)**

Literary stylistics as applied literary analysis that accommodates non-literary analysis; how literary semantics are unearthed through linguistics inquiry into texts; focus on the syntactic, phonological, discursal and lexical operations in the thematic and linguistic interpretation of texts; interpretation of the nuances of meaning in texts through the application of linguistic instruments; current linguistic theories as base of analyses of texts; through analyses through models for practical application of the acquired knowledge and skills.

### **ENG 454: Multilingualism (3 C)**

The multilingual nation and the varieties of its linguistic issues and their social, cultural and political implications: the problems of national languages, official orthographies, languages to be taught in schools; language policy; and language planning. Different aspects of multilingualism, Nigeria as a case study: language situation, multiglossic nature of language functions, language choice, language attitudes, plight and destiny of small group/minority language groups, management of multilingualism/ language engineering in Nigeria;

implications of multilingualism in Nigeria for other multilingual contexts.

**ENG 411: English for Specific Purposes (3 C)**

Adoption of English to particular circumstances and purposes; specialised varieties of English: the language of Journalism, bureaucracy, science and technology, ordinary conversation, etc. A short project involving a particular field.

**ENG 453: Language and National Development (3 E)**

Relationship between language and national development, relationship between language and individuals and societal development, language and the economy, language and national mobilisation, language and national unity and integration, language and national ideology, language and a patriotic culture, language and nationalism, language and national health, language and economic wellbeing, language and infrastructural facilities, language and social attitudes, language and social culture. Constraints placed on national development by the linguistic situations in developing African nations; language as the most effective means of human communication; language as the cornerstone of mass participation in the development process.

**ENG 414: Speech Writing (3 E)**

What speech writing entails. The communication process and the context of speech writing. Basic principles of speech writing. Types of speeches e.g. expository, analytical etc steps of quality speech writing e.g. choosing topics, sourcing information etc. Logic and style in speech writing. Review of selected speeches.

**Table 5: B.A. Ed French****( a )100 Level First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 101	Use of English and Communication Skills I	2	C
GST 105	History and Philosophy of Science	2	C
GST 107	The Good Study Guide	2	C
EDU 111	Foundations of education	2	C
FRE 111	Language Laboratory Work/Oral French	2	C
FRE 121	French Grammar I	2	C
FRE 131	Textual Analysis I	2	C
FRE 141	Intro. To Composition Writing in French	2	C
	<b>Minimum Credit Units Required</b>	6	
	GST and other General Courses	10	
	Core Courses (Educ and Specialisation Area)	16	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**( b) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 102	Use of English and Communication Skills II	2	C
EDU 112	Professionalism in Teaching	2	C
EDU 114	History of Education in Nigeria	2	C
FRE 112	Oral & Aural Comprehension	2	C
FRE 122	French Grammar II	2	C
FRE 132	Textual Analysis II	2	C
FRE 152	Intro. To French Culture and	2	C

	civilisation		
FRE 162	Intro. To Francophone African Culture and Civilisation	2	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	2	
	Core Courses (Educ and Specialisation Area)	14	
	<b>Sub-Total =</b>	<b>16</b>	
	<b>Maximum Credit Unit</b>	<b>24</b>	

**( c ) 200 Level First Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 203	Introduction to Philosophy and Logic	2	C
EDU 231	Curriculum Development Theory and Practice	2	C
EDU 233	General Teaching Methods	2	C
FRE 211	Advanced Studies in Oral and Written Comprehension I	2	C
FRE 221	French Grammar and composition I	2	C
FRE 231	Introduction to French Phonology	2	C
FRE 271	Introduction to Francophone African Literature (Prose, Poetry and Drama)	2	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	2	
	Core Courses (Educ and Specialisation Area)	12	
	<b>Sub-Total =</b>	<b>14</b>	
	<b>Maximum Credit Unit</b>	<b>24</b>	

**( d ) Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 202	Fundamentals of Peace and Conflict Resolution	2	C

EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
EDU 222	French Methods	2	C
FRE 212	Advanced Oral French	3	C
FRE 222	French Grammar & Composition II	3	C
FRE 282	Intro. to French Literature (Prose, Poetry & Drama)	2	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	2	
	Core Courses (Educ & Specialisation Area)	14	
	<b>Sub-Total =</b>	<b>16</b>	
	<b>Maximum Credit Unit</b>	<b>24</b>	

**( e ) 300 LEVEL First Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 301	Entrepreneurship Studies	2	C
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research Methods in Education	2	C
EDU 335	Teaching Practice I	3	C
FRE 301	Intro. To Translation	3	C
FRE 321	Advanced Studies in French Language structure 1	3	C
FRE 331	Advanced Studies in French Phonetics	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	2	
	Core Courses (Educ and Specialisation Area)	16	
	<b>Sub-Total =</b>	<b>18</b>	
	<b>Maximum Credit Unit</b>	<b>24</b>	

**(f) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU 332	Intro. To Educational Technology	2	C
EDU 314	Comparative Education	2	C
EDU 336	Post Teaching Practice Evaluation and Remediation	2	C
FRE 322	Advanced Studies in French Language Structure II	3	C
FRE 372	Advanced Studies in Pre-Independence Francophone African Literature (Prose and Drama)	3	C
FRE 392	Advanced Studies in Translation (Theme and Version)	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	0	
	Core Courses (Educ and Specialisation Area)	15	
	<b>Sub-Total =</b>	<b>15</b>	
	<b>Maximum Credit Unit</b>	<b>24</b>	

**(g) 400 Level First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit</b>	<b>Status</b>
EDU 421	Guidance and Counselling	2	C
EDU 423	Measurement and evaluation	2	C
EDU 435	Teaching Practice I	3	C
FRE 421	Advanced Studies in French Language Structure 111	2	C
FRE423	Linguistics Applied to the Teaching of French	2	C
FRE 411	Introduction to Research in French	3	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	0	
	Core Courses (Educ and	14	



	Specialisation Area)	14	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**(h) Second Semester**

Course Code	Course Title	Credit Unit	Status
EDU 412	Educational Management	2	C
EDU 420	Research Project	4	C
EDU 426	Special Education	2	C
ENG 454	Multilingualism	3	C
FRE 422	Advanced Studies in French Language Structure IV	2	C
FRE 482	20 <sup>TH</sup> Century French Literature	2	C
	<b>Minimum Credit Units Required</b>		
	GST and other General Courses	0	
	Core Courses (Educ and Specialisation Area)	15	
	<b>Sub-Total =</b>	<b>24</b>	
	<b>Maximum Credit Unit</b>		

**Course Content Specification**

**GST 101: Use of English and Communication Skills I (2C)**

Listening enabling skills, listening and comprehending comprehension, note taking and information retrieval. Including data, figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

**GST 102: Use Of English and Communication Skills Ii (2C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

**GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature and his origin, man, environment and resources, Great Nigerian Scientists

**GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organised, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks and lectures, learning from T.V and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay, conclusion. How to write essays: Introduction, the craft of writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

### **EDU111: Introduction to Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

### **EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programmes for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession.

### **EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

### **CIT 101: Computers in Society (2 E)**

Overview of the discipline of computer science. General structure of a computer system. Historical development of computer systems, generations of computer system, computer operations, internal structure of a computer hardware. Micro computer technology, computer numbering system, computer arithmetic, computer data

representative schemes, problem solving with computers. Elements of programming languages, internets, basic file processing concepts. Computer programming using VISUAL BASIC programming language. Algorithms, data structures and logic.

### **ENG 111: Introduction to Literature and Literary Criticism (3E)**

General introduction to literature; nature, forms, elements, functions and techniques of literature; study of the basic principles and methods of literary criticism. Texts representing the three major genres-poetry, drama, and prose fiction will be used for illustration and practice.

### **ENG 162: Elements of Drama (2 E)**

Nature of drama; its various elements, forms and artistic features. Selected African and non – African plays are studied in detail to illustrate these, such as Soyinka's *Trials of Brother Jero*, *Song of a Goat*, and *Sophocles' Oedipus Rex*.

### **FRE 111: Language Laboratory Work/Oral French (2C)**

Development of skills in written and verbal communication that enhance reading, writing, listening and speaking skills, Definition and Identification of Oral vowel sounds, Definition and Identification of Nasal vowel and semi-vowel sounds, Definition, Identification and general consideration of Consonant sounds, Definition, Identification, usage and general consideration of Silent letters in French, Definition, Identification, usage and general consideration of French accents in pronunciation, Definition, Identification, usage and general consideration of The principles of *liaison* in French, Definition, Identification, usage and general consideration of *Élision* and *enchaînement* in French, Intonation and stress in French, French diphthongs and triphthongs, Reading skills development and Pronouncing difficult words, Pronunciation of verb endings, Liaison, élision and enchaînement, Intonation in texts, monothongs, diphthongs and triphthongs; greetings and introduction, Buying and Selling, Consulting professionals for services, Telephone conversations, Hotel and Restaurant, Dictation exercises

**FRE 152: Introduction to French Culture and Civilisation  
(2C)**

Historical and Geographical perspective of France, The Renaissance period, The Revolution of 1789, The Socio-Political Implications of the Revolution, The Republics, Political life, Imperialism, Industrial Revolution and Colonisation; French cultural, social political and economic life in France and how it affects cultural development in Francophone African countries; Teaching and learning in France, Religion in France, Festivals in France, Music and Song in France, Marriage and Family in France, French Economy, Transportation, Leisure and Tourism, Social Security, Trade Unionism and the Francophony.

**FRE 141: Introduction to Composition Writing in French  
(2C)**

Development of skills in the practice of writing French with emphasis on narrative and descriptive forms. Definition of Composition, Types of composition, Definition of Essay, Types of Essay: Narrative, Descriptive and Empirical, Definition of Narrative Essay, Definition of Descriptive Essay, Definition of Empirical Essay, Method of Writing good Composition, Examples of Narrative Essay, Examples of Descriptive Essay, Examples of Empirical Essay.

**FRE 112: French Conversation (2 U)**

Definition of oral French, the scope of Oral French in the teaching and learning of French language, Utilisation of French and Francophone documents (songs, short plays, etc) to help the students to communicate and express themselves freely, Method of creation of vocabulary, Method of conversing in French Language.

**FRE 121: French Grammar I (2 C)**

Identification, formation, analysis and grammatical usage of Parts of speech in French: Article, Noun, Pronoun, Adjective, Verb, Adverb, Preposition, Conjunction and Interjection; Definition of each of these parts of speech, their importance in Grammar of French, how to use them in forming grammatically correct sentences.

**FRE 122: French Grammar 11 (2 C)**

Identification of conjugation groups, Conjugation of **er** and other regular verbs into *présent de l'indicatif*, Conjugation of **re** irregular verbs into *présent de l'indicatif*, Conjugation of **ir/oir** irregular verbs into *présent de l'indicatif*, Conjugation of impersonal and reflexive verbs into *présent de l'indicatif*, Conjugation of **er** and other regular verbs into *futur simple*, Conjugation of irregular verbs into *futur simple*, Conjugation of impersonal and reflexive verbs into *futur simple*, Conjugation of verbs with auxiliary *avoir* into *passé composé*, Conjugation with auxiliary *être* into *passé composé*, Conjugation of impersonal and reflexive verbs into *passé composé*, Agreement of *passé composé*, Conjugation of **er** and other regular verbs into *l'imparfait*, Conjugation of irregular verbs into *présent de l'imparfait*, Conjugation of impersonal and reflexive verbs into *l'imparfait*, Conjugation of verbs into imperative (positive and negative), Conjugation of verbs into *conditionnel présent*, Conjugation of verbs into *conditionnel passé*, Conjugation of verbs into *subjonctif présent*, Conjugation of verbs into *subjonctif passé*,

**FRE 131: Textual Analysis I (2 C)**

Definition, Identification, formation, analysis and grammatical usage of Textual Analyses to teach Grammar of French, Methods of Textual Analyses, Types of texts to be analysed, Critical and Logical study French texts so as to be able to analyse them grammatically, Derivation and Explanation of Grammatical Analyses derived from texts analysed.

**FRE 132: Textual Analysis II (2 C)**

Advanced definition, Identification, formation, analysis and grammatical usage of Textual Analyses to teach Grammar of French, Methods of Textual Analyses, Types of texts to be analysed, Critical and Logical study French texts so as to be able to analyse them grammatically, Advanced and explicit Explanation of Grammatical Analysis derived from texts analysed. This Course is a follow up to FRE 109.

**FRE 162: Introduction to Negro African Culture and Civilisation (2 C)**

Historical and Geographical perspective of Francophone African Countries, The Social life of Francophone African Countries, The Political life of Francophone African Countries, The cultural life of Francophone African Countries, The economic life of Francophone African Countries, Teaching and learning in Francophone African Countries, Religion in Francophone African Countries, Festivals in Francophone African Countries, Music and Song in Francophone African Countries, Marriage and Family in Francophone African Countries, Economy of Francophone African Countries, Transportation in Francophone African Countries, Leisure and Tourism in Francophone African Countries, Trade Unionism in Francophone African Countries, Francophone African Countries and the Francophony.

**GST 202: Fundamentals of Peace and Conflict Resolution (2C)**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

**GST 203: Introduction to Philosophy and Logic (2 C)**

Fundamentals of logic and critical thinking; types of discourse; nature of arguments; validity and soundness; techniques for evaluating arguments; distinction between inductive and deductive inferences; etc. Illustrations from familiar texts, including literature materials, novels, law reports and newspaper publications

**EDU 231: Curriculum Development Theory and Practice (2C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a

developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation

### **EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialisation:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

### **EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid,



Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questioning, Questions in Classroom: The teacher's questions, the pupil's questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-visual in teaching, Types of Audio-visual Aids and their uses.

#### **EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

#### **EDU 222: French Methods (2 C)**

Theories of Language Teaching, the Direct Method-oralcy before Literacy, the Indirect Method-translations, Pronunciation Nasal Vowels, final consonants, voiced consonants, sibilants, z, s, ch, j consonant grouping, Audio visual aids, grammar, Essay writing, Socio linguistic nature and function of language, political and a real linguistics.

### **EDU 301: Entrepreneurship Education (2 C)**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

### **ENG 251: Language and Society (3 E)**

Language as a Social phenomenon and its functions; social factors of language use; Language varieties: Dialect, accent and sociolect; register; style; standard, non- standard, native and non-native; deviant/restricted varieties (slang, jargon, grafitti); new varieties (email, text messaging); languages in contact (pidgin and Creole); Language typologies; anthropology; language learning and language acquisition; bilingualism/multilingualism; language policy; language planning, maintenance, shift and death; discourse analysis; code switching, interference and borrowing; linguistic imperialism; sociolinguistic situation of Nigeria; sociolinguistics and other disciplines.

### **FRE 231: Introduction to French Phonology (2 C)**

Definition of French phonology, General introduction to French phonology, Scope of French phonology, Nature of French phonology, Methods of Phonological inquiry and analyses in French phonology, Comparative Studies of Relationship between Phonetics and French Phonology, Comparative Studies of structural framework of Phonetics and French Phonology , Basic principles of French phonology, Basic tenets and analysis of French phonology based on the phonetic theories, Application of the distinctive feature theory to French phonology and Application of the generative phonology to French phonology.

**FRE 211: Advanced Study in Oral and Written Comprehension (2C)**

Definition and Identification of various registers of French language, Critical and Analytical Study of French and Francophone Newspaper Articles, Critical and Analytical Study of French and Francophone Official and Administrative Document, Critical and Analytical Study of French and Francophone Commercial Documents, Critical and Analytical Study of French and Francophone Scientific Documents, Critical and Analytical Study of French and Francophone Technical Documents, Critical and Analytical Study of French and Francophone Literary Documents and Excerpts.

**FRE 221: French Grammar and Composition I (2 C)**

Grammatical analysis from Morphological point of view, Definition of French Morphology, Scope of French Morphology, Branches and Types of French Morphology; Definitions, form, Types and Uses of “Emprunts” (Borrowing) in French Morphology; Definitions, form, Types and Uses of Affixations in French Morphology; Definitions, form, Types and Uses of “Les Compositions” (Compounding) in French Morphology; Definitions, form, Types and Uses of “Les Onomatopées” in French Morphology; Definitions, form, Types and Uses of “Les Initiaux ou Les Acronymes” (Acronyms) in French Morphology; Definitions, form, Types and Uses of “Les Mots coupés” (Shortened Words) in French Morphology; Importance of French Morphology. Definitions of Compositions, Types of Compositions, Methods of writing good Composition.

**FRE 271: Introduction to Francophone African Literature (Prose, Poetry and Drama) (3 C)**

Definition of Negro African literature written in French, Focus of Negro African literature written in French, Scope of Negro African literature written in French, Historical Perspective/Origin of Negro African literature written in French, Importance of Negro African literature written in French, The three types of Genre in Negro African literature written in French: Poetry, Prose and Drama. Literary appreciation through figures of speech in Negro African literature written in French, Analysis of the aesthetic function of Negro African literature written in French, Messages or Philosophy of

Negro African literature written in French, Movements or Schools of thought in Negro African literature written in French such as Negritude, Colonial era, Pre-Independence Negro African literature written in French, Post-Independence Negro African literature written in French etc.

**FRE 282: Introduction to French Literature (Prose, Poetry and Drama) (2 C)**

Definition of French literature, Focus of French literature, Scope of French literature, Historical Perspective/Origin of French literature, Importance of French literature, The three types of Genre in French Literature: Poetry, Prose and Drama. Literary appreciation through figures of speech, Analysis of the aesthetic function of French Literature, Messages or Philosophy of French literature, Movements or Schools of thought in French literature such as “Le Classicisme, Le Romantisme” etc.

**FRE 222: French Grammar and Composition II (3 C)**

Grammatical analysis from Semantological point of view, Definition of French Semantics, Scope of French Semantics, Branches and Types of French Semantics; Definitions, form, Types and Uses of Synonyms in French Semantics; Definitions, form, Types and Uses of Antonyms in French Semantics; Definitions, form, Types and Uses of Homonyms in French Semantics; Definitions, form, Types and Uses of Homophones in French Semantics; Definitions, form, Types and Uses of Homographs in French Semantics; Importance of French Semantology. Definition, Analyses and Use of Noun Phrase, Determinants, Adjective and Adjectival Phrase, Verbal Phrase, Adverbial Phrase and Prepositional Phrase. Conjugation and Utilisation of Verbs conjugated into plus-que parfait, the “passé” anterieur” and the futur anterieur’ of the indicative mood, present de l’indicatif and the past tenses. Advanced Definitions of Compositions, Illustration of Various Types of Compositions and Utilisation of Various Methods of Writing good Composition.

**FRE 212: Advanced Oral French (3 C)**

Advanced definitions of oral French, the scope of Oral French in the teaching and learning of French language, Advanced manner in

handling and utilising French and Francophone documents (songs, short plays, etc) to help the students to communicate and express themselves freely, Advanced method of creation of vocabulary, Advanced method of conversing in French Language.

### **EDU 321: Psychology of Learning (2 C)**

Definitions of psychology and learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – Skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application.

### **EDU 332: Introduction to Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process; The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instructional, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

### **EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design,

Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 314: Comparative Education (2 C)**

Scope and meaning of education, examination of significant differences and similarities in education policy and practices in selected societies, problems of educational development in developing countries.

**EDU 335: Teaching Practice I (4 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice
- The lesson notes used during the teaching practice
- Assessment questions as well as the marking guides used
- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the study centre Director for:

- Evaluation
- Feedback, and
- Remediation.

The result of the overall process should be communicated to the student from the Dean through the study centre Director.

**ENG 352: Discourse Analysis (3 C)**

Introduction to the principles and practice of discourse analysis; practical analysis, study, and description of relevant textual materials.

**FRE 331: Advanced Studies in French Phonetics (3 C)**

Definitions of Phonetics, Scope of Phonetics, Nature of Phonetics, Branches and Types of Phonetics, Importance of Phonetics in the Language Study, Phonetics and the Linguistic Movements; Phonetics and the Traditional School of Thought, Phonetics and the Structural School of Thought, Phonetics and the Generative School of Thought, Current Trends in the Study of Phonetics, Methods of Phonetical Analyses of Sounds, Practical Examples of Phonetical Analysis as they affect French Language.

**FRE 372: Advanced Studies in Pre-Independence Francophone African Literature (Prose and Drama) (3 C)**

Definitions of Pre-Independence Francophone African literature written in French, Focus of Pre-Independence Francophone African literature written in French, Scope of Pre-Independence Francophone African literature written in French, Historical Perspective/Origin of Pre-Independence Francophone African literature written in French, The Influence of Negritude on Pre-Independence Francophone African literature written in French, Importance of Pre-Independence Francophone African literature written in French, Pre-Independence Francophone African literature written in French and the Verbal War against Colonialism, Prose and Drama in Pre-Independence Francophone African literature written in French,. Literary appreciation through figures of speech in Pre-Independence Francophone African literature written in French, Analysis of the aesthetic function of Pre-Independence Francophone African literature written in French, Messages or Philosophy of Pre-Independence Francophone African literature written in French

**FRE 381: Advanced Studies in French Literature in The 17<sup>th</sup> Century (Prose and Drama) (3 C)**

Focus of 17<sup>th</sup> Century French literature, Scope of 17<sup>th</sup> Century French literature, Historical Perspective/Origin of 17<sup>th</sup> Century French

literature, 17<sup>th</sup> Century Socio-Political Events that facilitated and influenced the emergence of the literary works of that period, Importance of 17<sup>th</sup> Century French literature, Analysis of the three types of Genre in the 17<sup>th</sup> Century French Literature: Poetry, Prose and Drama. Literary appreciation through figures of speech of the 17<sup>th</sup> Century, Analysis of the aesthetic function of the 17<sup>th</sup> Century French Literature, Messages or Philosophy of 17<sup>th</sup> Century French literature, Analysis of the Influence and Dominance of “Academie Française” and the “Classicisme” Movement on the 17<sup>th</sup> Century French Literature.

### **FRE 382: French Literature in the 18<sup>th</sup> Century (3 C)**

Focus of 18<sup>th</sup> Century French literature, Scope of 18<sup>th</sup> Century French literature, Historical Perspective/Origin of 18<sup>th</sup> Century French literature, 18<sup>th</sup> Century Socio-Political Events that facilitated and influenced the emergence of the literary works of that period, Importance of 18<sup>th</sup> Century French literature, Analysis of the three types of Genre in the 18<sup>th</sup> Century French Literature: Poetry, Prose and Drama. Literary appreciation through figures of speech of the 18<sup>th</sup> Century, Analysis of the aesthetic function of the 18<sup>th</sup> Century French Literature, Messages or Philosophy of 18<sup>th</sup> Century French literature, Analysis of the Influence and Dominance of “Pré-romantisme” Movement on the 18<sup>th</sup> Century French Literature, Analysis of the Influence and Dominance of authors such as Diderot, Voltaire, Rousseau etc. on the 18<sup>th</sup> Century French Literature.

### **EDU 421: Guidance and Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counselling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counseling Service:- Nature, Purpose and Theories of Counseling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in



Guidance and counseling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student’s records and reports, Student’s discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**ENG 454: Multilingualism (3 U)**

The multilingual nation and the varieties of its linguistic issues and their social, cultural and political implications: the problems of national languages, official orthographies, languages to be taught in schools; language policy; and language planning. Different aspects of multilingualism, Nigeria as a case study: language situation, multilingual nature of language functions, language choice, language attitudes, plight and destiny of small group/minority language groups, management of multilingualism/ language engineering in Nigeria; implications of multilingualism in Nigeria for other multilingual contexts.

**FRE 481: French Literature in The 19<sup>th</sup> Century (2 C)**

Focus of 19<sup>th</sup> Century French literature, Scope of 19<sup>th</sup> Century French literature, Historical Perspective/Origin of 19<sup>th</sup> Century French literature, 19<sup>th</sup> Century Socio-Political Events that facilitated and influenced the emergence of the literary works of that period, Importance of 19<sup>th</sup> Century French literature, Analysis of the three types of Genre in the 19<sup>th</sup> Century French Literature: Poetry, Prose and Drama. Literary appreciation through figures of speech of the 19<sup>th</sup>

Century, Analysis of the aesthetic function of the 19<sup>th</sup> Century French Literature, Messages or Philosophy of 19<sup>th</sup> Century French literature, Analysis of the Influence and Dominance of “Romantisme” Movement on the 19<sup>th</sup> Century French Literature, Analysis of the Influence and Dominance of authors such as Victor Hugo, Gustave Flaubert, Abbé Prévost etc. on the 19<sup>th</sup> Century French Literature.

**FRE 423: Linguistics Applied to the Teaching of French (2C)**

Definitions of basic linguistics concepts and principles; Identification of Scope, Focus, Features and Importance of basic linguistics concepts and principles; Methods of Learning French Language through various Applied Linguistic Methods: social and pedagogical contexts of learning phonetics, phonology, grammar, vocabulary and stylistics and various problems that may arise in the course of learning French.

**FRE 482: French Literature in the 20<sup>th</sup> Century (2 E)**

Focus of 20<sup>th</sup> Century French literature, Scope of 20<sup>th</sup> Century French literature, Historical Perspective/Origin of 20<sup>th</sup> Century French literature, 20<sup>th</sup> Century Socio-Political Events that facilitated and influenced the emergence of the literary works of that period, Importance of 20<sup>th</sup> Century French literature, Analysis of the three types of Genre in the 20<sup>th</sup> Century French Literature: Poetry, Prose and Drama. Literary appreciation through figures of speech of the 20<sup>th</sup> Century, Analysis of the aesthetic function of the 20<sup>th</sup> Century French Literature, Messages or Philosophy of 20<sup>th</sup> Century French literature, Analysis of the Influence and Dominance of “L’Absurdité et la Révolte camusiennes” as well as “L’Existentialisme sartrien” Movements on the 20<sup>th</sup> Century French Literature, Analysis of the Influence and Dominance of authors such as Albert Camus and Jean-Paul Sartre etc. on the 20<sup>th</sup> Century French Literature.

**FRE 471: Advanced Studies in Post-Independence Francophone African Literature (Prose and Drama) (2 C)**

Definitions of Post-Independence Francophone African literature written in French, Focus of Post-Independence Francophone African literature written in French, Scope of Post-Independence Francophone

African literature written in French, Historical Perspective/Origin of Post-Independence Francophone African literature written in French, The Influence of African Socio-Political Events on Post-Independence Francophone African literature written in French, Importance of Post-Independence Francophone African literature written in French, Post-Independence Francophone African literature written in French and the Verbal War against Neo-Colonialism, Prose and Drama in Post-Independence Francophone African literature written in French,. Literary appreciation through figures of speech in Post-Independence Francophone African literature written in French, Analysis of the aesthetic function of Post-Independence Francophone African literature written in French, Messages or Philosophy of Post-Independence Francophone African literature written

**FRE 472: Francophone Literature (Pre and Post Independence) (2 C)**

Definitions of Pre and Post Independence Francophone African literature Poetry written in French, Focus of Pre and Post Independence Francophone African literature Poetry written in French, Scope of Pre and Post Independence Francophone African literature Poetry written in French, Historical Perspective/Origin of Pre and Post Independence Francophone African literature Poetry written in French, The Influence of Negritude on Pre and Post Independence Francophone African literature Poetry written in French, The Influence of African Socio-Political Events on Pre and Post Independence Francophone African literature Poetry written in French, Importance of Pre and Post Independence Francophone African literature Poetry written in French, Pre and Post Independence Francophone African literature Poetry written in French and the Verbal War against Colonialism and Neo-Colonialism, Literary appreciation through figures of speech in Pre and Post Independence Francophone African literature Poetry written in French, Analysis of the aesthetic function of Pre and Post Independence Francophone African literature Poetry written in French, Messages or Philosophy of Pre and Post Independence Francophone African literature Poetry written in French.

**Table 6: B.A. (Ed) Primary Education 4211**

**(a) 100 Level**

**First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 101	Use of English & Communication Skills I	2	C
GST 105	History and Philosophy of Science	2	C
GST 107	The Good Study Guide	2	C
EDU 111	Introduction to Foundations of Education	2	C
ECE 121	Child Development	2	C
PED 121	Childhood and Adolescent Psychology	2	C
ENG 151	Introduction to English as a Second Language	2	C
CIT 101	Computers in Society	2	C
	<b>Total Credit Units – Compulsory</b>	<b>16</b>	

\*Students are to offer one elective course of two credit units.

\*Direct Entry students are to offer GST101 and 107.

**( b ) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 102	Use of English and Communication Skills Ii	2	C
EDU 112	Professionalism in Teaching	2	C
PED 144	Primary Maths Curriculum and Methods	2	C
EDU 114	History of Education	2	C
PED 110	Philosophy of Primary Education	2	C
PED 122	Primary English Curriculum and Methods	2	C
PED 112	Reading in Early Childhood and Primary Education	2	C
PED 150	Primary Science Curriculum and Methods	2	C
PED 130	Introduction to Social Studies	2	C
CIT 102	Software Application Skills	2	C
	<b>Total Credit Units –</b>	<b>20</b>	
	<b>Compulsory</b>		

\*Students are to offer one elective course of two credit units.

**( c ) 200 Level First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 203	Introduction to Philosophy and Logic	2	C
GST 201	Nigerian Peoples and Culture	2	C
EDU 231	Curriculum Development Theory and Practice	2	C
EDU 233	General Teaching Methods	2	C
PED 221	Developmental Psychology	2	C
PED 233	Religious and Moral Education	2	C
PED 271	Primary School Curriculum and Methods	2	C
PED 261	Primary School Social Studies	2	C

	Curriculum and Methods		
ECE 231	Science in Early Years	2	C
PED 237	Measurement and Shapes	2	C
ECE 221	Language and Literacy in the Early Years	2	C
PED 235	Clothing and Textiles	2	E
	<b>Total Credit Units – Compulsory</b>	<b>22</b>	

\*Students are to offer one elective course of two credit units.

**( d ) Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 202	Fundamentals of Peace Studies and Conflict Resolution	2	C
EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
EDU 292	Primary Education Methods	2	C
PED 230	Introduction to Music In Primary School	2	C
PED 234	Man, Energy and Resources	2	C
PED 236	Elementary Mathematics	2	C
EDU 216	Special Methods II (Micro Teaching And School Visits)	2	C
	<b>Total Credit Units – Compulsory</b>	<b>16</b>	

\*Students are to offer one elective course of two credit units.

**(e) 300 Level First Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 301	Entrepreneurship Studies	2	C
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research Methods and Statistics in Education	3	C
EDU 335	Teaching Practice I	3	C

ECE 313	Theories and Practice of Early Childhood Education	2	C
PED 351	Adult Basic Education	2	C
PED 313	History and Cultural Background of Immediate Environment	2	C
ECE 311	Introduction To Cultural and Creative Arts	2	C
ENT 323	Entrepreneurial Development and Small Business Management	2	C
	<b>Total Credit Units – Compulsory</b>	<b>20</b>	

\*Students are to offer one elective course of two credit units.

**( f ) Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
EDU 332	Educational Technology	2	C
EDU 314	Comparative Education	2	C
PED 322	Methods of Teaching Reading in Primary Schools	2	C
PED 320	Family Education	2	C
PED 312	Fundamentals of Early Childhood and Primary Education	2	C
PED 342	Methods of Teaching Creative Arts in Early Childhood and Primary Education	2	C
EDU 336	Post Teaching Practice Evaluation/Remediation	2	C
EDU 302	ICT in Education	2	C
	<b>Total Credit Units – Compulsory</b>	<b>16</b>	

\*Students are to offer one elective course of two credit units.

**( g ) 400 Level First Semester**

Course Code	Course Title	Credit Unit ( s )	Status
EDU 421	Fundamentals of Guidance and Counselling	2	C



EDU 423	Measurement and Evaluation	2	C
EDU 435	Teaching Practice II	3	C
PED 431	Continuous Assessment in Primary School	2	C
PED 433	Children's Literature	2	C
PED 421	Developmental Guidance in Primary Education	2	C
ECE 421	Health and Family Life Education	2	C
PED 423	Seminar in Primary Education	2	C
	<b>Total Credit Units – Compulsory</b>	<b>17</b>	

( h ) **Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU 412	Educational Management	2	C
EDU 420	Research Project	4	C
EDU 426	Special Education	2	C
PED 412	Organisation and Administration of Primary Education	2	C
PED 420	Social Psychology of Instruction	2	C
PED 422	Behaviour Problems and the Primary School Child	2	C
PED 410	Management Of Childhood Institutions	2	C
ECE 410	Issues in Early Childhood and Primary Education	2	C
PED 430	Design and Production of Learning Materials for Primary School	2	C
	<b>Total Credit Units – Compulsory</b>	<b>20</b>	

## Course Content Description

### **GST 101: Use of English and Communication Skills I (2 C)**

Listening Enabling Skills, Listening and Comprehending, Note taking, Information Retrieval including Data, Figures, Diagrams and Charts. Listening for Main Idea, Interpretation and Critical Evaluation. Effective Reading, Skimming and Scanning, Reading and Comprehending at Varying Speed Levels, Reading for Vocabulary Development in Various Academic Contexts. Reading Diverse Texts; Narratives and Expository Texts. Reading and Comprehending Passages with Tables, Scientific Texts, Reading for Interpretation and Critical Evaluation.

### **GST 105: History and Philosophy of Science (2 C)**

Nature of Science, Scientific Methods and Theories, Laws of Nature, History of Science; Origin of Western Science in Ancient Times, Science in the Middle Ages of Europe, Rise of Modern Science, Twentieth Century Scientific Revolution. Lost Sciences of Africa, Science, Technology and Inventions, Nature and Scope of Philosophy of Science, Man; His Nature and Origin, Cosmic Environment and Natural Resources, Great Scientists of Nigerian Origin.

### **GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, Why read about study skills, Getting yourself organized, What is studying all about, Reading and Note-taking: Introduction, Reactions to reading, Your reading strategy, Memory, Taking notes. Other ways of studying: Introduction, Learning in groups, Talks and lectures, Learning from T.V and Radio broadcasts, Other study media. Working with numbers: Getting to know numbers, Describing the world, Describing the tables, Describing with diagrams and graphs, What is good writing? The importance of writing, What does an essay look like, What is a good essay. How to write essays; Introduction, The craft of writing, The advantages of treating essay writing as a craft, Making your essay flow, Making a convincing case, The experience of writing. Preparing for examination.

**EDU 111: Introduction to Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

**ECE 121: Child Development (2 C)**

A broad introduction to nature and concept of the psychology of child development from conception through the prenatal years to the childhood and adolescent stages. The pre-school years, the school years.

**PED 121: Childhood and Adolescent Psychology (2 C)**

Childhood and adolescent psychology and educational implication, cognitive, social, moral, emotional and physical needs and development of children, age 0 – 18 years, the normal and abnormal child development and implications for classroom management and teaching.

**ENG 151: Introduction to English as a Second Language (2C)**

Domains and Status of Language; the spread of English worldwide; Varieties of English in Nigeria; Standards and Deviations in English; Language Nationism and Nationalism; Distinctions between ESL, Pidgin and Creole; Aspects of Teaching English as A Second Language; the teaching of Literature in English; Assessment of learner's in ESL. Social institutions (patterns, structures and functions).

### **ECE 113: Introduction to Philosophy of Early Childhood Education (2E)**

Meaning and definition of philosophy, philosophy of early childhood, pre-primary education, concept and types of early childhood education, the role expectation of the pre-primary school teacher, implication for effective teaching, characteristics of preparing school children and their implication to teaching, historical perspectives and challenges, purposes and needs of pre-primary education, problems perspectives and challenges of pre-primary education in Nigeria – A way forward, the prospects of pre-primary education in Nigeria, Plato (427-348 BC) and Aristotle (384-372 BC) Jean Jacques Rousseau (1712-1778), John Amos Commenius (1592-1670), John Heinrich Pestalozzi (1746-1827), Montessori (1870-1952), Frederich W. Froebel (1782-1852) and John Dewey (1959-1962).

### **CIT 101: Computers in Society (2 C)**

What is Computer, Elements of a Computer: Hardware and Software, How to Work with a Computer, Operating Systems, and Files. Word Processing: Introduction to Word Processing, Word Processing Program Facilities, Copying text, Saving Changes, and Formatting. Spreadsheet: Entering and Correcting Data, Using Formula, Numeric Formats, Creating Charts, Charts from Non-adjacent Data, Embedded Charts, Charts Links and Chart Types. PowerPoint and Presentations: Presentation Screen, Creating New Presentations, Naming Presentations, Saving Presentations and Formatting Slides, Using Auto-shapes. Networking, Internet and Electronic mail.

### **ECE 113: Philosophy of Early Childhood Education (2 C)**

Meaning and definition of philosophy, philosophy of early childhood, pre-primary education, concept and types of early childhood education, the role expectation of the pre-primary school teacher, implication for effective teaching, characteristics of preparing school children and their implication to teaching, historical perspectives and challenges, purposes and needs of pre-primary education, problems perspectives and challenges of pre-primary education in Nigeria – A way forward, the prospects of pre-primary education in Nigeria, Plato (427-348 BC) and Aristotle (384-372 BC) Jean Jacques

Rousseau (1712-1778), John Amos Commenius (1592-1670), John Heinrich Pestalozzi (1746-1827), Montessori (1870-1952), Frederick W. Froebel (1782-1852) and John Dewey (1959-1962).

**GST 102: Use Of English and Communication Skills II  
(2C)**

Writing Paragraphs; Topic Sentence and Coherence, Development of Paragraphs; Illustration, Description, Cause and Effect, Definitions. Formal Letters; Stylistic Forms, Essential Parts, Complaints and Requests, Letters about Jobs, Ordering Goods, Letters to Government and Other Organisations. Writing Reports; Reporting Events and Experiments. Writing Summaries; Techniques of Summarising. Letters and Sounds in English, Vowels and Consonants, Interviews, Seminar Presentation, Public Speech Making, Articles, Concord and Sentences, Tenses, Gerunds and Participles, Active, Passive and the Infinitive, Modal Auxiliaries.

**EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession

**PED 144: Primary Maths Curriculum and Methods  
(2 C)**

Basic concept underlying the determination of objectives, the selection and organisation of learning experiences and evaluation process, the beginning and nature of merits as distinctive discipline, assessment of maths attainment, concept, formation and attitudes transferred from home to the primary schools, individual differences in pupils maths abilities, the teaching of numbers and fundamental properties of operations in arithmetic.

### **EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

### **PED 110: Philosophy of Primary Education (2 C)**

The concept of education, aims, goals and objectives, meaning, scope and functions of philosophical foundations of childhood and primary education, the role expected of the primary school teacher, characteristics of primary school children, meaning and purpose of primary education the origin of primary school in Nigeria, a historical perspective, the basic outlines of the National policy on primary education, the concept of the UBE contributions of Plato to primary education. Contributions Jean Jacques, Rousseau, John Amos Commeruies, John Henrich Petalozzi, Maria Montessori and John Dewey to primary education, relevance of philosophy of education to the primary school teacher. Survey of the philosophy of Nigerian education with emphasis on the National Policy on Primary education and a study of implementation efforts and problems. The course should involve practical survey implementation efforts

### **PED 122: Primary English Curriculum and Methods (2 C)**

This is an introductory course to provide students with basic knowledge, course to understand the skills as applying in the principles of educational practice to the teaching of English Language in primary schools, major aspects examined include why and how of teaching English language, development in English language curricula, evaluation techniques and classroom organisation and management.

**PED 112: Reading in Early Childhood and Primary Education 2C**

Fundamentals of reading instruction at the preschool and lower primary school level, importance of reading in language development of preschoolers and primary school children, theories underlying the choice of approaches, methods, techniques and instructional resources needed to develop the reading and academic skills of preschoolers and primary level pupils.

**PED 150: Primary Science Curriculum and Methods (2 C)**

This introductory course aims to provide students with basic knowledge, understanding the skills in applying the principles of educational practice to the teaching of the sciences, major aspects to include why and how of teaching science, developments in science curricula, evaluation techniques and laboratory organisation and management.

**PED 130: Introduction to Social Studies Education (2C)**

Emphasis on the concepts of development, self reliance education, the philosophy of social studies, civic rights and responsibilities (means and ends in development)

**CIT 102 Software Application Skills (2C)**

Brief description of computer system: CPU, I/O devices; Operating systems; Computer File Management; Computer Software: overview, types, etc.; Application software: common application software; Using Microsoft Word; Using Microsoft Excel; Features of Database Applications and Microsoft Access; Statistical Analysis Applications; Using SPSS software; Introduction to Desktop Publishing applications; Computer applications in Nursing; Computer applications in Agriculture; Managing the computer system with the Control Panel.

**GST 203 Introduction to Philosophy and Logic (2 C)**

Definition and Scope of Philosophy, Philosophy as the Parent Discipline, Branches of Philosophy, Philosophy and Other Disciplines, Sources of Knowledge and Criteria for Knowing. Definition and Scope of Logic, Logic's Vocabulary, Valid, Invalid,

Deductive and Inductive Arguments, Language and its Functions. Fallacies, Definitions, Categorical Propositions, Syllogisms, Symbolising in Logic, Truth Table Analysis, Logical Proofs of Validity Using Truth Tables, Rules of Inference and Argument Forms, Laws of Thought.

### **GST 201: Nigerian Peoples and Culture (2 C)**

The Culture and Peoples of Southern and Northern Nigeria in Pre-colonial Times, The Dynamics of the Evolution of Nigeria as a Political Unit, The Culture of the Niger Delta; Rain Forest; Guinea and the Sudan Savanna Regions of Nigeria, A Historical Analysis of Education and National Development, Economy and National Development, Religion and National Development in Nigeria. A Historical Analysis of Moral and Socio-political Rights of Citizens, Social Justice and National Development in Nigeria.

### **EDU 231: Curriculum Development Theory and Practice (2 C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation

### **EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table.



General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questioning, Questions in Classroom: The teacher's questions, the pupil's questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical Environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-Visual in Teaching, Types of Audio-visual Aids and their uses

**PED 221: Developmental Psychology (2C)**

Basic concepts and nature of developmental psychology: developmental psychology as a branch of psychology, basic principles of growth and development in human behaviour, biological basis of human development, scientific methods in developmental psychology. Major theories of human development: psychoanalytic, behaviouristic, psychosocial, cognitive theories. Stages of human growth and development: prenatal, neonatal, childhood, adolescence stages

**PED 233: Religious and Moral Education (2 C)**

This course will discuss relevant concept pertaining to the moral domain, the philosophical, psychological and pedagogical issues in the area of moral education and the problems and strategies of implementation of moral education programmes of primary school.

**PED 271: Primary School Physical and Health Education and Curriculum and Methods (2 C)**

The nature and scope of physical and health education, emphasis should be on academic failure and how achievement problems on academics, factors responsible for poor academic achievement, study habits and academic achievement, types and uses of achievement test, remediation methods, fundamental skills in relation to movement education organisation of sports and games in primary school with special reference to common sports in Nigeria, safety maintenance.

**PED 261: Primary School Social Studies Curriculum and Methods (2C)**

An examination of the rationale for teaching social science subjects, appraisal of the contemporary syllabus in social studies, design and organisation of lesson plans, instructional materials and evaluation techniques.

**ECE 231: Science in the Early Years (2 C)**

The study of the history of science: What is Science? The importance of science, the nature of Science, the history; The beginnings of Science: Science and Crafts, the beginning of human history, the beginning of Civilizations, Science in the early Egypt and Babylonia, the contributions of the early civilizations e.g. tools, writing, medicine and surgery, Astronomy, Mathematics etc. The History of Science in the middle Ages: The beginnings of theoretical science e.g. Physics, Chemistry, Mathematics, Medicine, Astronomy and Physiology, Biology, etc., the decline of science, Science in the East (Islamic World (C642 – C1000 AD); Science in Western Europe (CII – C15 AD): Scientist of the period, Scientific and technological advancement; Science in the renaissance period (1400 – 1600); Science in the 17<sup>th</sup> Century; Science in the 18<sup>th</sup> Century; Science in the 19<sup>th</sup> Century; Science in the 20<sup>th</sup> Century; Science in the Millennium

**PED 237: Measurements and Shapes (2 C)**

Measurement and calculations, standards units of measurement, significant figures, unit conversions and calculations, definition of density, basic and derived units, uncertainties in measurement, kind and properties of lines, angles and triangles, solids or 3-dimensional shapes, plane shapes, perimeters of plane, areas, curved and total, surface areas, volumes of simple solids.

**ECE 221: Language and Literacy in Early Childhood Education (2C)**

Development of language, the process of language acquisition, the role of language in early years, mother tongue, English language and bilingualism in early years, behaviourist theory of language acquisition, Vygotsky's cultural/cognitive, theory of language acquisition, maturationist theory of language acquisition, literacy and pre-reading activities and reading, readiness approaches for teaching reading, organisation of reading instruction, reading activities, handwriting, developing writing, language and literacy across the curriculum.

**GST 202: Fundamentals of Peace Studies and Conflict Resolution (2C)**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis and Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

**EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialization: Culture and Personality, Education and Social Frame Work:- The Family and

Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

### **EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

### **EDU 292: Primary Education Methods (2 C)**

An overview of the meaning, history and basic principles and methods in primary education, the relevance and problems of primary education in Nigeria, assessment of learning approaches as to subjects, age, and environment of children in primary schools, a detailed analysis of method of teaching specific primary school subject, evaluation of programmes and students' achievement.

### **PED 230: Introduction to Music in Primary Education (2C)**

Music in society: what is music, instruments for making music, categories of music, traditional African music, music in indigenous Nigerian festival. Foundation of music: music notation, time names, tones and semitones. The music scale: use of tonic solfa, music intervals, elements of music, rhythmic organization melody writing, harmony.

**PED 234: Man, Energy and Resources (2 C)**

History of life, the theory of evolution, the nature of earliest organisms, evidences for the theory of evolution, origin of man, energy and man, man's energy needs and sources, energy and chemical systems, energy conversion, food resources, rubbers and related products, mineral resources, vegetations and water resources, conservation of national resources.

**PED 236: Elementary Mathematics (2 C)**

Number and numeration: basic arithmetic operations in integers; indices, logarithms and surds; meaning and types of fractions, number bases; approximations; rate; proportion; and ratio. Algebraic processes: factorisation and linear equations; quadratic and simultaneous equations; algebraic graphs; change of subject of formulae linear inequalities. Geometrical solids and shapes; triangles; circle; area and volume of various geometrical; solids and shapes

**EDU 216: Special Methods II (Micro Teaching & School Visits) (2C)**

The course shall examine the theory and practical aspect of micro teaching. Specifically, it will expose students to meaning of micro teaching, teaching skills such as set induction skills, stimulus variation skills, questioning skills, non-verbal communication skills, use of instructional material skills and closure skills. Students are expected to demonstrate each of the skills under supervision of micro teaching lecturer.

**ECE 230: Introduction to Curriculum Development in Early Childhood Education (2 C)**

Curriculum concepts, theoretical foundation of pre-school curriculum, early childhood development, meeting the needs of the children pre-school curriculum development models similarities and differences among pre-school curriculum development models, the role of the teacher in curriculum development, early childhood curriculum content and context, evaluation of pre-school curriculum, modes of pre-school curriculum evaluation, quality indicators.

**FRE 152: Introduction to French Culture and Civilisation  
(2C)**

Historical and Geographical perspective of France, The Renaissance period, The Revolution of 1789, The Socio-Political Implications of the Revolution, The Republics, Political life, Imperialism, Industrial Revolution and Colonisation; French cultural, social political and economic life in France and how it affects cultural development in Francophone African countries; Teaching and learning in France, Religion in France, Festivals in France, Music and Song in France, Marriage and Family in France, French Economy, Transportation, Leisure and Tourism, Social Security, Trade Unionism and the Francophony

**GST 301: Entrepreneurship Studies (2C)**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

**EDU 321: Psychology of Learning (2 C)**

Definitions of psychology & learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application

**EDU 323: Basic Research Methods and Statistics in Education (3C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**ECE 313: Theories and Practice of Early Childhood Education (2C)**

The historical and philosophical bases of early childhood education, the nature and contexts of child development, surveys theories about children's growth and development from birth through eight years of age, stages of cognitive development, physical, social, emotional and moral development, language development, causes and characteristics of developmental anomalies. Contemporary early childhood models – Maria Montessori, Reggio Emilia models.

### **PED 351: Adult Basic Education 2C**

Meaning / concept of education; brief history of education in Nigeria; formal education; informal education; importance of education; difference between education and literacy; meaning / concept of adulthood/adult education; the national policy on adult education; characteristics of adult basic education; characteristics of adult learner; goals of adult basic education; history of adult education in Nigeria; rationale for adult education in the Nigerian teacher education programme; types of adult education; methods of teaching in adult education programmes; innovations in adult education programs in Nigeria; problems of adult education in Nigeria; strategies applied to promote adult education, literacy and non-formal education in Nigeria

### **PED 313: Historical and Cultural Background of Immediate Environment (2 C)**

Overview of cultural differences in child-rearing practices, communication patterns and experiences of families, children and their views of self and others in the Family, school and community, support networks in the community.

### **ECE 311: Introduction to Cultural and Creative Arts (2C)**

Families and communities, child rearing practices and communication patterns in the family, cultural differences, family and community arts-carving, basketing, leatherwork. graphic and textile, drama, festivals and ceremonies, drawing of simple objects using pencil, pen, ink, charcoal, graphite, pastel, etc. Colour mixture with emphasis on tonal values, monochromatic raising, specific polychromatic pasting of objects with particular reference to shapes, forms and tones, objectives, principles and aims of teaching creative arts, roles of creative arts in classroom and to students, how to teach creative arts to pupils.

### **EDU 332: Introduction to Educational Technology (2C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process, The experience, Theory of Learning, learning and Communication in the



classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instruction, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**EDU 314: Comparative Education (2 C)**

Scope and meaning of education, examination of significant differences and similarities in education policy and practices in selected societies, problems of educational development in developing countries.

**PED 322: Methods of Teaching Reading in Primary School (2C)**

Nature of reading, reading readiness, reading approaches, methods, strategies and types of reading: Language skills and their interrelatedness; the nature of reading and important reading experiences in the primary school; reading readiness skills; approaches, methods and strategies of teaching reading I (phonics, structural, look and say, word form clues, picture clues and context clues); approaches, methods and strategies of teaching reading II: language experience, whole language, literature based, oral, silent and individualised); types of reading: oral and silent, skimming and scanning, intensive and extensive). Development of reading skills: goals and objectives of teaching reading; development of word recognition skills; development of interpretative skills; development of skills for reading in content areas; resources for teaching reading evaluation of reading skills

**PED 320: Family Education (2 C)**

Concept of family education: Types of families and the effects on children's care and education; Roles of parents, teachers and the children in the family; Physical and health development in the family; Types of education available for the family; Traditional family education – what was – what is – and what next; Education resources in the family, e.g. books, TV, Computer, etc; Financial resources and management in the family; Communication and the family; Decision making and the family; Family friendly food and recipe; Family fun and entertainments; Children's play and the family .

### **PED 312: Fundamentals of Early Childhood and Primary Education (2C)**

Meaning, philosophy, purpose and history of early childhood and primary education; great philosophers/educators contributions to early childhood and primary education; research methods in early childhood and primary education; understanding growth and development of early childhood and primary education by teachers and caregivers; major theories of early childhood and middle childhood; implications of the theories for learning and teaching preschoolers and primary school pupils; early childhood and primary education curriculum delivery; teaching methods in early childhood and primary education; teaching and learning resources early childhood and primary education; early childhood programmes/centres and primary education; minimum standards for establishment; challenges of early childhood and primary education.

### **PED 342: Methods of Teaching Creative Arts in Early Childhood and Primary Education (2C)**

Art methodology, methods of teaching arts, creative art curriculum for early childhood and primary education classroom, visual arts in early childhood and primary education, qualities of a good creative art teacher, fine art, applied art, creative art material and improvisation, basic scheme of work on creative arts for young artist, arts appreciation, young artists and creativity, art terminologies for better understanding of creative art, factors affecting the teaching of creative art in early childhood and primary education, structure of a successful work of art.

### **EDU 336: Post Teaching Practice Evaluation/ Remediation ( 2C)**

Students are required to write comprehensive report of their experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include

1. Challenges encountered during the teaching practice.
2. The lesson notes used during the teaching practice.
3. Assessment questions as well as the marking guides used.

4. Assessment of teaching practice supervision by the supervisor, and
5. Suggestions for improvement.

The report should be submitted by the students to Dean through the Study Centre Director for:

- a. Evaluation;
- b. Feedback; and
- c. Remediation

The result of the overall process should be communicated to the students from the Dean through the Study Centre Director.

### **EDU 302: ICT in Education (2C)**

ICT in Education Teachers' Professional Development Toolkit, Course Introduction, Understanding ICT in Education: Advancing Policy through Classroom Action and the use of Technology, Modification of Lesson Plans to Support Policy, Internet Navigation, Modification of Lesson Plans to Support Policy, National ICT Policy and its Impact on Education, Report on Policy Impact. Curriculum & Assessment: Curriculum Standards, Internet Search Engines – Advanced Searching, School Records, Classroom Records. Pedagogy: Integrating ICT to Support Didactic Teaching Methodologies, PowerPoint for Pedagogues, Strategies for Integrating ICT into Learning, Graphic Tools to Enhance Teaching and Learning. Organisation and Administration: Learning Activities for a Computer Laboratory Environment, Management of the Use of ICT in a Classroom Environment. Teacher Professional Development: Teacher Productivity Strategies, Use of ICT to Support Lifelong Learning, Safety Issues in Digital Environments.

### **ECE 222: Developing Professional Skills and Competence (2C)**

Teaching as a profession. Meaning and characteristics of a profession, the challenge of the teacher's work from the Christian Missionary Era to the Era of Universalisation of access to education. The Teachers Registration Council. National Policy on Teacher Education in

Nigeria. The Goals of Teacher Education in Nigeria. Qualities of a good teacher. Behavioural job expectations for teachers. Learner characteristics and teacher interaction. The teaching – learning process. Planning to teach. Keeping up to date in teaching. The place of teachers in the society.

### **EDU 421: Fundamentals of Guidance and Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counselling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counselling Service:- Nature, Purpose and Theories of Counselling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counseling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

### **EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of

test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**PED 431: Continuous Assessment in Primary School (2C)**

Emphasis on the nature and role of continuous assessment in diagnostic and prescriptive management in teaching and learning, cumulative record keeping and rudiments of achievement test construction, continuous assessment record keeping using achievement test scores (emphasizing statistical techniques such as the measurement of central tendencies and dispersion, transformation of scores, weighting of scores) for obtaining students academic profile.

**PED 433: Children's Literature (2 C)**

Young children's literacy development strategies children use to become readers and writers, recording and reporting children's literacy development, models of literacy instruction, young children prose and poem, writers of children books.

**PED 421: Developmental Guidance in Primary Education. (2 C)**

What is developmental guidance (areas of educational, personal and vocational development)? Who are guidance Counsellors? What are the functions of a guidance Counsellor? What are the educational guidance needs of children in the primary school? What are the personal guidance needs of a primary school child? What are the social guidance needs of a primary school child? What are the emotional guidance needs of a primary school child? Guidance services in primary schools: Collaborative guidance services in primary schools (parents, teachers, counsellors, etc)

**ECE 421: Health and Family Life Education (2 C)**

The importance of good family living. The variables involved in marriage and divorce such as dating, going steady, pregnancy and

child rearing practices are examined with the educational implications. Improvement of personal health knowledge. Provides motivation for self direction in personal health related issues.

**PED 423: Seminar in Primary Education (2C)**

Active participation of students in seminar presentation in primary education topics such as: the concept of primary education, the nature and concept of the psychology of child development, meaning and forms of education, the role expectation of primary school teacher, the rights of children, the acquisition of attitudes and skills, the development of primary education in Nigeria, kinds of learning, principles of learning and instruction, methods of teaching in primary school, analysis of problems and issues related to teacher effectiveness in teaching, amongst others. The topics will be given out to students for presentation at the study centres under the supervision of the instructional facilitators.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**PED 412: Organisation and Administrative of Primary School (2C)**

The detailed procedure in the organisation of school, the planning and financing, the role of Government agents at different levels of Governments – Local, State and Federal, a continuous analysis of the organisation of the UBE and related reports etc.

**PED 420: Social Psychology of Instruction (2 C)**

Central concepts; Theories and problems areas in social psychology; The relationships between social psychology and instruction; Interaction and organisational processes in primary schools; Ways in which identity and relationships are formed in society with a focus on analysing some key problem areas, such as – communication, emotions, gender and ethnicity issues; Research processes in social psychology.

**PED 422: Behavioural Problems and the Primary School Child (2 C)**

Conceptual clarification; Psychological theories and problem behavior; Maladjustments; Disruptive behaviors; Problem behavior and the teacher; Promotion of emotional stability and maturity in pupils by the school; Therapeutic management of disruptive behaviors; Management of the deviant or delinquent child; Discipline in primary school. Mental health of the classroom teacher and his/her pupils; Personal and professional challenges of the classroom requires a well – adjusted, stable teacher.

### **PED 410: Management of Childhood Institutions (2C)**

Introduction and basic concepts of management of childhood institutions: management of childhood/primary education, the concept and types of organisation, theories of organisation, the childhood institutions as a social organisation. Power, authority and leadership in primary education: bases of leader power, authority, leadership, role of primary school system as an organisation, discipline and punishment in childhood schools. Motivation, communication and other issues in childhood institutions and management, motivation, communication in childhood institution, establishment of childhood institutions & management, management laws in childhood institutions

### **ECE 410: Issues in Early Childhood and Primary Education (2C)**

Discussion of current issues in the operation of early childhood institutions, issues of regulations, the language of instruction, problems.

### **PED 430: Design and Production of Learning Materials for Primary School (2C)**

The need for learning Materials in Primary School as Primary Education within the context of the National Policy of Education, the Characteristics of Primary School Children, The Primary School Curriculum, Teaching and Learning, Primary School Children Learning Styles, Design of Instructional Materials, Designing Instructional materials, Producing Instructional Materials, Theories Relevant to the Design and Production of Learning Materials., Development and Production of Learning Materials, Analysis Phase, Design Phase of Learning Materials Evaluation Phase – Evaluating Learning Materials, The Learning Package, Application of Learning Materials in the Classroom Plan, Prepare, and use Learning Materials, Effective use of the Environment.

### **Outline of Course Structure**

The B. A. Ed. (Hons) Early Childhood Education is structured to run for a minimum of five years and maximum of eight years for students



starting at 100 level or minimum of four years and maximum of six years for students at 200 level.

### Degree Rules

To be eligible for the award of the B.A. Ed. Hons. in Early Childhood Education, a student must have passed a minimum of 120 and 90 credit units for the 4 year- and 3 year- degree programme respectively.

**Table 7: Summary of Distribution of Course Credits by Level**

Level	GST and other General Courses	Education		Subject/Specialisation Area		Total
		Compulsory	Elective	Compulsory	Elective	
100	8	6	-	22	4	40
200	6	10	-	18	4	38
300	2	18	-	14	8	42
400	-	15	-	18	6	39
<b>Total</b>	16	49	-	72	22	159

**Table 8: B.A (Ed) Early Childhood Education 4208**

**(a) 100 Level First Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 101	Use of English And Communication Skills I	2	C
GST 105	History and Philosophy of Science	2	C
GST 107	The Good Study Guide	2	C
EDU 111	Introduction to Foundations of Education	2	C

ECE 121	Child Development	2	C
ECE 113	Introduction to Philosophy of Early Childhood Education	2	C
ECE 123	Health Care in the Early Years	2	C
MAT 102	Introduction to Statistics in Education	2	C
PED 122	Primary English Curriculum and Methods	2	C
PED 144	Primary Mathematics Curriculum Methods	2	C
	<b>Total Credit Units – Compulsory</b>	<b>20</b>	

**(b) 100 Level Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 102	Use Of English and Communication Skills II	2	C
ECE 110	Childhood Education in Traditional African Society	2	C
ECE 112	Origin and Development of E.C.E	2	C
ENG 151	Introduction to English as a Second Language	2	C
PED 112	Reading in Early Childhood and Primary Education	2	C
EDU 112	Professionalism in Teaching	2	C
EDU 114	History of Education in Nigeria	2	C
CIT 102	Software Application Skills	2	C
	<b>Total Credit Units – Compulsory</b>	<b>16</b>	

\* **Note:** Students are to offer a minimum of one elective course of two credit units at the end of the session.

\* Each student would offer a maximum of 40 credit units.

**(c) 200 Level**

**First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 201	Computers in Society	2	C
GST 203	Introduction to Philosophy and Logic	2	C
EDU 231	Curriculum Development Theory and Practice	2	C
EDU 233	General Teaching Methods	2	C
ECE 223	Plays and Learning	2	C
ECE 221	Language and Literacy in the Early Years	2	C
ECE 227	Organisation and Service Provision in E.C.E	2	C
ECE 225	Meeting Special Needs in E.C.E	2	C
ECE 231	Science in the Early Years	2	C
PED 236	Elementary Mathematics	2	C
<b>Total Credit Units – Compulsory</b>		<b>20</b>	

\* At the end of the semester, Direct Entry students must offer GST 101, GST 105, GST 107.

**(d) 200 Level**

**Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit</b>	<b>Status</b>
GST 202	Fundamentals of Peace Studies and Conflict Resolutions	2	C
EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
ECE 230	Introduction to Early Childhood Education Curriculum Development	2	C

ECE 232	Observation, Recording and Assessment in Early Childhood Education	2	C
EDU 216	Special Method II (Micro Teaching)	2	C
EDU 290	Early Childhood Education Methods	2	C
	<b>Total Credit Units – Compulsory</b>	<b>14</b>	

- \* **Note** :Students are to offer a minimum of one elective course of two credit units at the end of the session.
- \* Each student would offer a maximum of 36 credit units.
- \* At the end of the semester, Direct Entry students must offer GST 102.

**( e ) 300 Level**

**First Semester**

Course Code	Course Title	Credit Unit	Status
GST 301	Entrepreneurship Studies	2	C
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research Methods in Education	3	C
EDU 335	Teaching Practice I	3	C
ECE313	Theories and Practice of Early Childhood Education	2	C
PED 313	Historical and Cultural Background of Immediate Environment	2	C
ENT 323	Entrepreneurial Development and Small Business Management	2	C
	<b>Total Credit Units – Compulsory</b>	<b>16</b>	

- \* At the end of the semester, Direct Entry students must offer GST 203.

**( f )300 Level**

**Second Semester**

Course Code	Course Title	Credit Unit	Status
EDU	Educational Technology	2	C

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EDU 302	ICT in Education	2	C
EDU 314	Comparative Education	2	C
EDU212	Language and Literacy in the Early Years	2	C
PED234	Man Energy and Resources	2	C
PED 237	Measurement and Shapes	2	C
EDU336	Post Teaching Practice Experience / Remediation	2	C
PED 322	Methods of Teaching Reading in Primary School	2	C
PED 271	Primary School Phe Curriculum and Methods	2	C
PED 342	Methods of Teaching Creative Arts in Early Childhood and Primary Education	2	C
PED 352	Adult Basic Education	2	C
	<b>Total Credit Units – Compulsory</b>	<b>22</b>	

- \* **Note** : Students are to offer a minimum of one elective course of two credit units at the end of the session.
- \* Each student would offer a maximum of 37 credit units.
- \* At the end of the semester, Direct Entry students must offer GST 202.

**( g )400 Level**

**First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU 421	Fundamentals Of Guidance And Counselling	2	C
EDU 423	Measurement and Evaluation	2	C
EDU 435	Teaching Practice II	3	C
ECE 421	Health and Family Life Education	2	C

ECE 413	Comparative Early Childhood Education	2	C
PED 421	Developmental Guidance in Primary Education	2	C
PED 433	Children Literature	2	C
PED 431	Continuous Assessment in Primary Education	2	C
	<b>Total Credit Units – Compulsory</b>	<b>17</b>	

**( h )400 Level**

**Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU 420	Research Project	4	C
EDU 412	Principles of Educational Management	2	C
EDU 426	Special Education	2	C
ECE 422	The School Environment and the Child	2	C
ECE 420	Seminar in Early Childhood Education	2	C
ECE 410	Issues in Early Childhood and Primary Education	2	C
ECE 412	Management of Early Childhood Education	2	C
PED 420	Social Psychology of Instruction	2	C
PED 430	Design and Production of Learning Materials for Primary School	2	C
	<b>Total Credit Units – Compulsory</b>	<b>20</b>	

\* **Note:** Students are to offer a minimum of one elective course of two credit units at the end of the session.

\* Each student would offer a maximum of 37 credit units.

## Course Content Specification

### **GST 101: Use of English and Communication Skills I (2 Credit Units C)**

Listening enabling skills, listening and comprehending comprehension, note taking and information retrieval. Including data, figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

### **GST 102: Use of English and Communication Skills II (2 C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

### **GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature and his origin, man, environment and resources, Great Nigerian Scientists.

### **GST 107: The Good Study Guide (2 C)**

Getting Started:- How to use the book, why read about study skills, getting yourself organized, what is studying all about, reading and note-taking: Introduction, reactions to reading, your reading strategy,

memory, taking notes, conclusion. Other ways of studying:- Introduction, learning in groups, talks and lectures, learning from T.V and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay? Conclusion. How to write essays: Introduction, the craft of writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

### **GST 202: Fundamentals of Peace Studies & Conflict Resolution**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

### **GST 203: Introduction to Philosophy and Logic**

Definition and Scope of Philosophy, Philosophy as the Parent Discipline, Branches of Philosophy, Philosophy and Other Disciplines, Sources of Knowledge and Criteria for Knowing. Definition and Scope of Logic, Logic's Vocabulary, Valid, Invalid, Deductive and Inductive Arguments, Language and its Functions. Fallacies, Definitions, Categorical Propositions, Syllogisms, Symbolising in Logic, Truth Table Analysis, Logical Proofs of Validity Using Truth Tables, Rules of Inference and Argument Forms, Laws of Thought.



### **GST 301: Entrepreneurship Studies**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

### **CIT 101: Computers in Society**

What is Computer, Elements of a Computer: Hardware and Software, How to Work with a Computer, Operating Systems, and Files. Word Processing: Introduction to Word Processing, Word Processing Program Facilities, Copying text, Saving Changes, and Formatting. Spreadsheet: Entering and Correcting Data, Using Formula, Numeric Formats, Creating Charts, Charts from Non-adjacent Data, Embedded Charts, Charts Links and Chart Types. PowerPoint and Presentations: Presentation Screen, Creating New Presentations, Naming Presentations, Saving Presentations and Formatting Slides, Using Auto-shapes. Networking, Internet and Electronic mail.

### **COP 112: Introduction to General Agriculture 11 (2 C)**

To enable learners understand the impact of agriculture on the socio-economic development of Nigeria. Concept of agriculture concept of land tenure system and factors affecting land use in Nigeria, types of farming and their characteristics in Nigeria, cropping systems, problems of agriculture, development and modernisation in agriculture, importance of agriculture to the Nigerian economy, methods and strategies in agricultural extension, economic importance of livestock and poultry to man, management principles of some selected farm animals, agricultural finance, credit and marketing, simple farm tools and machinery, types of soils and plants, agricultural finance, credit and marketing, simple farm tools and machinery, types of soil and plants, agricultural biology and its scope.

Scope of horticulture, methods of propagating horticultural plants, agricultural cooperatives, types and application of fertiliser.

**COP 111: Introduction to General Agriculture I (2 C)**

The objective of this course is to be able to define agriculture and its branches, explain the importance of agriculture in terms of its contributions to the socio-economic development of the country, explain types of land tenure and factors affecting them in Nigeria, describe traditional farming types in Nigeria and compare with modern farming, explain the merits and demerits of each of the farming system, describe the importance of research in modern agricultural development, proffer solutions to these problems, explain the importance of extension services in agriculture, the various types of soils and crops and advise on the type of soil suitable for crops.

**CIT 102: Software Application Skills (2C)**

Brief description of computer system: CPU, I/O devices; Operating systems; Computer File Management; Computer Software: overview, types, etc.; Application software: common application software; Using Microsoft Word; Using Microsoft Excel; Features of Database Applications and Microsoft Access; Statistical Analysis Applications; Using SPSS software; Introduction to Desktop Publishing applications; Computer applications in Nursing; Computer applications in Agriculture; Managing the computer system with the Control Panel.

**PED 234: Man, Energy and Resources (2 C)**

History of life, the theory of evolution, the nature of earliest organisms, evidences for the theory of evolution, origin of man, energy and man, man's energy needs and sources, energy and chemical systems, energy conversion, food resources, rubbers and related products, mineral resources, vegetations and water resources, conservation of national resources.

**EDU 111: Introduction to Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning

theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

**EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teacher association, the status of teacher in Nigeria, strategies for making teaching a profession

**EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, advent of western education in Nigeria, The early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria education 1872 – 1882, education ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, the National Curriculum Conference and the National Policy on Education.

**ECE 120: Development of Appropriate Skills in Children (2C)**

Cognition, Piaget's stages of cognitive development. Sensory – perceptual capability and response, perceptual and intellectual development. The process of language acquisition. Language skills. Role of language in early years. Social and emotional development and skills. Reading skills, writing skills. Listening enabling skills, skills for studying, how to study. Forming emotional bonds. Assimilation and Accommodation. Conservation Skills. Kohlberg's stages of moral development.

**ECE 121: Child Development (2 C)**

A broad introduction to nature and concept of the psychology of child development from conception through the prenatal years to the childhood and adolescent stages. The pre-school years, the school years.

**ECE 123: Health Care in Early Years (2 C)**

Health: Definition, General Characteristics of children in the early years; Word Declaration on the Rights of the child as affecting their survival, health, protection and care. Maternal wellbeing as a factor of children's health care; Poverty; traditional health care practices; Community health issues; HIV/AIDS; Personal health; Indigenous child rearing practices supporting health care for children; Nutrition, Micronutrients and Micronutrients, Deficiencies. – Childhood diseases: polio, malaria, meningitis, yellow fever, diarrhea, tetanus, etc; child abuse and intervention measures. Health – care monitoring and assessment instruments; Care; management of childhood disease; protection issues; immunisation against childhood killer diseases. Health care intervention by international donor agencies, e.g. World Health Organisation (WHO), UNICEF, USAID, CARE, etc.

**ECE 110: Childhood Education in Traditional African Society (2 C)**

The meaning and forms of education, characteristics and goals of traditional African education, the African family system, marriage, child bearing and care, breast feeding and weaning in traditional African society, toilet training of children in traditional African society, the role of parents in the up-bringing of children in African society, the acquisition of attitudes and Skills, language development, social and emotional development, moral development, the techniques of traditional African education, problems of traditional African education into the formal school system, integration of traditional African education.

**ECE 113: Intro to Philosophy of Early Childhood Education (2 C)**

Meaning and definition of philosophy, philosophy of early childhood, pre-primary education, concept and types of early childhood

education, the role expectation of the pre-primary school teacher, implication for effective teaching, characteristics of preparing school children and their implication to teaching, historical perspectives and challenges, purposes and needs of pre-primary education, problems perspectives and challenges of pre-primary education in Nigeria – A way forward, the prospects of pre-primary education in Nigeria, Plato (427-348 BC) and Aristotle (384-372 BC) Jean Jacques Rousseau (1712-1778), John Amos Commenius (1592-1670), John Heinrich Pestalozzi (1746-1827), Montessori (1870-1952), Frederich W. Froebel (1782-1852) and John Dewey (1959-1962).

### **ECE 112: Origin and Development of Early Childhood Education (2 C)**

The concept of early childhood education, the nature and needs of children, historical views of children, the contributions of individuals to the improved status of children, the rights of children, origin and development of early childhood education, the origin of Western Education in Nigeria, the UBE programme in Nigeria, the development of pre-school education in Nigeria, Early Child Care and Development Initiative in Nigeria. Universal Basic Education and Early Childhood Education. Major constraints in the UBE. Problems of pre-primary Education in Nigeria. How to start a pre-primary school.

### **GST 202: Philosophy and Logic (2 C)**

Fundamentals of logic and critical thinking; types of discourse; nature of arguments; validity and soundness; techniques for evaluating arguments; distinction between inductive and deductive inferences; etc. Illustrations from familiar texts, including literature materials, novels, law reports and newspaper publications.

### **EDU 231: Curriculum Theory and Practice (2C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting

Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation.

### **EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialization:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

### **EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questing, Questions in Classroom: The teacher's questions, the pupil's questions, Guidelines for questioning. Testing and

Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical Environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-Visual in Teaching, Types of Audio-visual Aids and their uses.

### **EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of Education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

### **Aesthetic Expressions in Primary Education**

Drawing and painting of simple objects, concepts and practices, rules of visual observation and use of various media for drawing and painting lettering and simple designs for aesthetics decorations.

### **ECE 223: Plays and Learning (2 C)**

Play – basic concepts, learning at childhood, kinds of learning, the interrelationship between play and learning, growth and development of pre-school child, the environment in early childhood education, planning the environment, play-based learning and teaching models, play materials, daycare learning activities, outdoor facilities, organising the outdoor learning environment, play and the Montessori approach, principles of learning and instruction, the Montessori method.

### **ECE 221: Language and Literacy in Early Education Childhood (2C)**

Development of language, the process of language acquisition, the role of language in early years, mother tongue, English language and bilingualism in early years, behaviourist theory of language acquisition, Vygotsky's cultural/cognitive, theory of language acquisition, maturationist theory of language acquisition, literacy and pre-reading activities and reading, readiness approaches for teaching reading, organisation of reading instruction, reading activities, handwriting, developing writing, language and literacy across the curriculum.

### **ECE 230: Introduction to Curriculum Development in Early Childhood Education (2 C)**

Curriculum concepts, theoretical foundation of pre-school curriculum, early childhood development, meeting the needs of the children pre-school curriculum development models similarities and differences among pre-school curriculum development models, the role of the teacher in curriculum development, early childhood curriculum content and context, evaluation of pre-school curriculum, modes of pre-school curriculum evaluation, quality indicators.

### **ECE 231: Science in the Early Years (2 C)**

The study of the history of science: What is Science? The importance of science, the nature of Science, the history; The beginnings of Science: Science and Crafts, the beginning of human history, the beginning of Civilisations, Science in the early Egypt and Babylonia, the contributions of the early civilisations e.g. tools, writing, medicine and surgery, Astronomy, Mathematics etc. The History of Science in the middle Ages: The beginnings of theoretical science e.g. Physics, Chemistry, Mathematics, Medicine, Astronomy and Physiology, Biology, etc., the decline of science, Science in the East (Islamic World (C642 – C1000 AD); Science in Western Europe (CII – C15 AD): Scientist of the period, Scientific and technological advancement; Science in the renaissance period (1400 – 1600); Science in the 17<sup>th</sup> Century; Science in the 18<sup>th</sup> Century; Science in the 19<sup>th</sup> Century; Science in the 20<sup>th</sup> Century; Science in the Millennium



**ECE 232: Observation, Recording and Assessment in Early Childhood Education (2 C)**

Historical perspectives and issues of early childhood assessment, observing and criticising screening approaches, assessment techniques and materials, observation and authentic assessment and its relationship to curriculum in early childhood, legal and ethical issues of assessment of young children.

**ECE227: Organisation and Service Provision in Early Childhood Education (2 C)**

Organisation and service provision, knowledge of administrative and supervisory issues, administrative policies, financial budget planning, preparation and fiscal management, professionalism of early childhood teacher, behavioural issues within an organisation, issues of motivation and morale, conflict resolution and group dynamics, child care agencies.

**EDU 290: Early Childhood Education Methods (2 C)**

The basic teaching methods in early childhood education child centered method, questioning method, group methods, story- telling method, project method, discussion method, play method, demonstration method, Montessori method, activity method, role playing method, phonic method, selection of teaching methods, teaching and learning environment.

**ECE 222: Developing Professional Skills and Competence (2C)**

Teaching as a profession. Meaning and characteristics of a profession. The challenge of the teacher's work from the Christian Missionary Era to the Era of Universalisation of access to education. The Teachers Registration Council. National Policy on Teacher Education in Nigeria. The Goals of Teacher Education in Nigeria. Qualities of a good teacher. Behavioural job expectations for teachers. Learner characteristics and teacher interaction. The teaching – learning process. Planning to teach. Keeping up to date in teaching. The place of teachers in the society.

**ENG 121: Structure of Modern English I (2 C)**

General introduction to the structure of English: phonological, syntactic and morphological levels; basic sentence phrase structures, clause types and inter – sentential relations, etc

**EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 314: Comparative Education (2 C)**

Scope and meaning of Education, Examination of Significant Differences and Similarities in Education Policy and Practices in Selected Societies, Problems of Educational Development in Developing Countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**EDU 321: Psychology of Learning (2 C)**

Definitions of psychology & learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of

learning and classroom application, S – R theory of Thorndike – Skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application

**EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process, The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instructional, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**ECE 313: Theories and Practice of Early Childhood Education (2C)**

The historical and philosophical bases of early childhood education, the nature and contexts of child development, surveys theories about children's growth and development from birth through eight years of age, stages of cognitive development, physical, social, emotional and moral development, language development, causes and characteristics of developmental and malies. Contemporary early childhood models –Maria Montessori, Reggio Emilia models.

**ECE 311: Introduction to Cultural and Creative Arts (2C)**

Families and communities, child rearing practices and communication patterns in the family, cultural differences, family and community arts-carving, basketing, leatherwork. graphic and textile, drama, festivals and ceremonies, drawing of simple objects using pencil, pen, ink, charcoal, graphite, pastel, etc. Colour mixture with emphasis on tonal values, monochromatic raising, specific polychromatic pasting of objects with particular reference to shapes, forms and tones, objectives, principles and aims of teaching creative arts, roles of creative arts in classroom and to students, how to teach creative arts to pupils.

**MAT 102: Introduction to Statistics in Education (2C)**

Measures of Central Tendency and dispersion, (grouped and ungrouped); mean:- arithmetic and geometric, harmonic, median, mode quartiles, deciles, modes, relative and absolute dispersion, sample space and events as sets. Finite probability space properties of probability. Statistical independence and conditional probability. Tree diagram. Bayes theorem. Discrete and continuous random variables. Expectation, independent Bernoulli trials. Binomial Poisson and Normal distributions. Normal approximation to binomial and Poisson distribution, Hyper geometric.

**EDU 421: Fundamentals of Guidance and Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counseling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counselling Service:- Nature, Purpose and Theories of Counseling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counselling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision

making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**ECE 421: Health and Family Life Education (2 C)**

Stresses the importance of good family living. The variables involved in marriage and divorce such as dating, going steady, pregnancy and child rearing practices are examined with the educational implications. Improvement of personal health knowledge. Provides motivation for self direction in personal health related issues.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its

meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**ECE 422: The School Environment and the Child (2C)**

The school environment and the child's place in the ecological system, concept of integration in human environment. The concept of limits, social and economic. Student-resource relations, ecology of human resource, consequences of child environment relations.

**ECE 413: Comparative Early Childhood Education (2C)**

An examination of early childhood education projects in the USA, UK, Nigeria etc., the primary science projects, the project selection criteria, findings and relevance of the above to early childhood education.

**ECE 410: Issues in Early Childhood and Primary Education (2C)**

Discussion of current issues in the operation of early childhood institutions. Issues of regulations, the language of instruction problems.

**ECE 412: Management of Early Childhood Education (2C)**

Types of early childhood programmes, primary education programmes, roles of resource, persons in childhood institutions, child indices, nursery assistants/aids. Class teachers, volunteer workers, proprietors/proprietresses, head teachers, board members/directors, finances – budget planning & preparation, equipment and facilities, licensing rules and regulations, monitoring and control.

### **ECE420: Seminar in Early Childhood Education (2 C)**

Active participation of students in seminar presentation in early childhood education topics such as: the concept of early childhood education, the nature and concept of the psychology of child development, meaning and forms of education, concept and types of early childhood education, the role expectation of early primary school teacher, child rearing and care in African society, purposes and needs of early childhood education, the rights of children, the acquisition of attitudes and skills, the development of pre-school education in Nigeria, the UBE and early childhood education, learning in childhood, kinds of learning, the relationship between play and learning, play and the Montessori approach, principles of learning and instruction, the process of language acquisition, concept of integration in human environment, consequences of child environment relations, and types of early childhood programmes and their implications, amongst others, will be given out to students for presentation at the study centres under the supervision of the Instructional Facilitators.

### **PED 122: Primary English Curriculum and Methods (2 C)**

This is an introductory course to provide students with basic knowledge, course to understand the skills as applying in the principles of educational practice to the teaching of English Language in primary schools, major aspects examined include why and how of teaching English language, development in English language curricula, evaluation techniques and classroom organisation and management

### **PED 236: Elementary Mathematics (2 C)**

Number and numeration: basic arithmetic operations in integers; indices, logarithms and surds; meaning and types of fractions, number bases; approximations; rate; proportion; and ratio. Algebraic processes: factorisation and linear equations; quadratic and simultaneous equations; algebraic graphs; change of subject of formulae linear inequalities. Geometrical solids and shapes; triangles; circle; area and volume of various geometrical; solids and shapes

**PED 313: Historical and Cultural Background of Immediate Environment (2 C)**

Overview of cultural differences in child-rearing practices, communication patterns and experiences of families, children and their views of self and others in the Family, school and community, support networks in the community.

**PED 237: Measurements and Shapes (2 C)**

Measurement and calculations, standards units of measurement, significant figures, unit conversions and calculations, definition of density, basic and derived units, uncertainties in measurement, kind and properties of lines, angles and triangles, solids or 3-dimensional shapes, plane shapes, perimeters of plane, areas, curved and total, surface areas, volumes of simple solids.

**PED 144: Primary Mathematics Curriculum and Methods (2 C)**

Basic concept underlying the determination of objectives, the selection and organisation of learning experiences and evaluation process, the beginning and nature of merits as distinctive discipline, assessment of mathematics attainment, concept, formation and attitudes transferred from home to the primary schools, individual differences in pupils' maths abilities, the teaching of numbers and fundamental properties of operations in arithmetic.

**PED 322: Methods of Teaching Reading in Primary School (2C)**

Nature of reading, reading readiness, reading approaches, methods, strategies and types of reading: Language skills and their interrelatedness; the nature of reading and important reading experiences in the primary school; reading readiness skills; approaches, methods and strategies of teaching reading I (phonics, structural, look and say, word form clues, picture clues and context clues); approaches, methods and strategies of teaching reading II: language experience, whole language, literature based, oral, silent and individualised); types of reading: oral and silent, skimming and scanning, intensive and extensive). Development of reading skills: goals and objectives of teaching reading; development of word recognition skills; development of interpretative skills; development



of skills for reading in content areas; resources for teaching reading evaluation of reading skills

**PED 271: Primary School Physical and Health Education and Curriculum and Methods (2 C)**

The nature and scope of physical and health education, emphasis should be on academic failure and how achievement problems on academics, factors responsible for poor academic achievement, study habits and academic achievement, types and uses of achievement test, remediation methods, fundamental skills in relation to movement education organisation of sports and games in primary school with special reference to common sports in Nigeria, safety maintenance.

**PED 421: Developmental Guidance in Primary Education (2 C)**

What is developmental guidance (areas of educational, personal and vocational development)? Who are guidance Counsellors? What are the functions of a guidance Counsellor? What are the educational guidance needs of children in the primary school? What are the personal guidance needs of a primary school child? What are the social guidance needs of a primary school child? What are the emotional guidance needs of a primary school child? Guidance services in primary schools: Collaborative guidance services in primary schools (parents, teachers, Counsellors, etc)

**PED 433: Children's Literature (2 C)**

Young children's literacy development strategies children use to become readers and writers, recording and reporting children's literacy development, models of literacy instruction, young children prose and poem, writers of children books.

**PED 430: Design and Production of Learning Materials for Primary School (2C)**

The need for learning Materials in Primary School as Primary Education within the context of the National Policy of Education, the Characteristics of Primary School Children, The Primary School Curriculum, Teaching and Learning, Primary School Children Learning Styles, Design of Instructional Materials, Designing Instructional materials, Producing Instructional Materials, Theories

Relevant to the Design and Production of Learning Materials., Development and Production of Learning Materials, Analysis Phase, Design Phase of Learning Materials Evaluation Phase – Evaluating Learning Materials, The Learning Package, Application of Learning Materials in the Classroom Plan, Prepare, and use Learning Materials, Effective use of the Environment.

**PED 431: Continuous Assessment in Primary School (2C)**

Emphasis on the nature and role of continuous assessment in diagnostic and prescriptive management in teaching and learning, cumulative record keeping and rudiments of achievement test construction, continuous assessment record keeping using achievement test scores (emphasising statistical techniques such as the measurement of central tendencies and dispersion, transformation of scores, weighting of scores) for obtaining students academic profile.

**PED 312: Fundamentals of Early Childhood and Primary Education (2C)**

Meaning, philosophy, purpose and history of early childhood and primary education; great philosophers/educators contributions to early childhood and primary education; research methods in early childhood and primary education; understanding growth and development of early childhood and primary education by teachers and caregivers; major theories of early childhood and middle childhood; implications of the theories for learning and teaching preschoolers and primary school pupils; early childhood and primary education curriculum delivery; teaching methods in early childhood and primary education; teaching and learning resources early childhood and primary education; early childhood programmes/centres and primary education; minimum standards for establishment; challenges of early childhood and primary education.

**PED 351: Adult Basic Education (2C)**

Meaning / concept of education; brief history of education in Nigeria; formal education; informal education; importance of education; difference between education and literacy; meaning / concept of adulthood/adult education; the national policy on adult education;

characteristics of adult basic education; characteristics of adult learner; goals of adult basic education; history of adult education in Nigeria; rationale for adult education in the Nigerian teacher education programme; types of adult education; methods of teaching in adult education programmes; innovations in adult education programs in Nigeria; problems of adult education in Nigeria; strategies applied to promote adult education, literacy and non-formal education in Nigeria

### **EDU 302: ICT in Education (2C)**

ICT in Education Teachers' Professional Development Toolkit, Course Introduction, Understanding ICT in Education: Advancing Policy through Classroom Action and the use of Technology, Modification of Lesson Plans to Support Policy, Internet Navigation, Modification of Lesson Plans to Support Policy, National ICT Policy and its Impact on Education, Report on Policy Impact. Curriculum & Assessment: Curriculum Standards, Internet Search Engines – Advanced Searching, School Records, Classroom Records. Pedagogy: Integrating ICT to Support Didactic Teaching Methodologies, PowerPoint for Pedagogues, Strategies for Integrating ICT into Learning, Graphic Tools to Enhance Teaching and Learning. Organisation and Administration: Learning Activities for a Computer Laboratory Environment, Management of the Use of ICT in a Classroom Environment. Teacher Professional Development: Teacher Productivity Strategies, Use of ICT to Support Lifelong Learning, Safety Issues in Digital Environments.

### **EDU 216: Special Method II (Micro Teaching)**

The course shall examine the theory and practical aspect of micro teaching. Specifically, it will expose students to meaning of micro teaching, teaching skills such as set induction skills, stimulus variation skills, questioning skills, non-verbal communication skills, use of instructional material skills and closure skills. Students are expected to demonstrate each of the skills under supervision of micro teaching lecturer.

### **PED 342: Methods of Teaching Creative Arts in Early Childhood and Primary Education (2C)**

Art methodology, methods of teaching arts, creative art curriculum for early childhood and primary education classroom, visual arts in early childhood and primary education, qualities of a good creative art teacher, fine art, applied art, creative art material and improvisation, basic scheme of work on creative arts for young artist, arts appreciation, young artists and creativity, art terminologies for better understanding of creative art, factors affecting the teaching of creative art in early childhood and primary education, structure of a successful work of art.

### **112: Reading in Early Childhood and Primary Education**

Fundamentals of reading instruction at the preschool and lower primary school levels, importance of reading in language development and academic achievement of pre-schoolers; theories that underlie the choice of approaches, methods, techniques and instructional resources needed to develop the reading and academic skills of pre-schoolers and primary level pupils.

### **EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice
- The lesson notes used during the teaching practice
- Assessment questions as well as the marking guides used
- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the Study Centre Director for:

- Evaluation

- Feedback, and
- Remediation.

The result of the overall processes should be communicated to the student from the Dean through the Study Centre Director.

## **B.Sc (Ed) Physics**

### **Graduation Requirement**

The B.Sc (Ed) Physics is structured to run for a minimum of four years and a maximum of eight years for students starting at 100 level or a minimum of three years and a maximum of six years for students entering at 200 level.

To be eligible for the award of the B.Sc. (Ed) Hons. in Physics a student must have passed a minimum of 145 and 106 credit units for the four year and threeyear degree programme respectively.

**Table 9: B.Sc (Ed) Physics**

<b>(a) Year I</b>		<b>First Semester</b>	
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 101	Use of English and Communication Skills I	2	C
GST 107	The Good Study Guide	2	C
EDU 111	Foundations of Education	2	C
PHY 101	Elementary Mechanics, Heat and Properties of Matter	3	C
PHY 191	Introductory Practical Physics I	1	C
BIO191	Introductory Practical Biology I	1	C
BIO 101	General Biology I	2	C
CHM191	Introductory Practical Chemistry I	1	C
CHM 101	Introductory Inorganic Chemistry	2	C

CHM 103	Introductory Chemistry	Physical	2	C
CIT 101	Computers in Society		2	C
	<b>Total Credit Units</b>		<b>20</b>	

**(b) Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST 102	Use of English and Communication Skills II	2	C
EDU 112	Professionalism in Teaching	2	C
EDU 114	History of Education in Nigeria	2	C
BIO192	General Biology Practical II	1	C
PHY 192	Introductory Physics Laboratory II	1	C
MTH101	General Mathematics I	3	C
MTH 102	General Mathematics II	3	C
PHY 103	Geometric and Wave Optics	1	C
PHY 102	Electricity, Magnetism and Modern Physics	3	C
CHM192	Introductory Practical Chemistry II	1	C
	<b>Total Credit Units</b>	<b>19</b>	

**(c) Year II**

**First Semester**

Course Code	Course Title	Credit Unit(s)	Status
GST	Nigerian Peoples and Culture	2	C

201			
GST 203	Introductory to Philosophy and Logic	2	C
EDU 231	Curriculum Theory and Practice	2	C
EDU 233	General Teaching Methods	2	C
PHY 207	Thermodynamics	2	C
PHY 201	Classical Mechanics I	3	C
PHY 203	Oscillations and Waves	2	C
PHY 291	Physics Laboratory I	1	C
	<b>Total Credit Units</b>	<b>16</b>	

**(d) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit</b>	<b>Status</b>
GST 202	Fundamentals of Peace Studies and Conflict Resolutions	2	C
EDU 256	Physics Methods	2	C
EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
PHY 202	Modern Physics I	3	C
PHY 204	Electromagnetism	2	C
PHY 208	Network Analysis and Devices	3	C
	<b>Total Credit Units</b>	<b>16</b>	

**(e) Year III First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit</b>	<b>Status</b>
EDU 335	Teaching Practice I	3	C
EDU 321	Psychology Of Learning	2	C
GST 301	Entrepreneurship Studies	2	C
EDU 323	Basic Research Methods In Education	2	C
ENT 323	Entrepreneurship Education	2	C
SED 305	Practicum in Science Teaching	3	C
Phy304	Electrodynamics 1	2	C
PHY 391	Physics Laboratory II	2	C
PHY 301	Classical Mechanics	2	C
PHY 307	Solid State Physics I	2	C
PHY 311	Kinetic Theory and Statistical Mechanics	2	C
	<b>Total Credit Units</b>	<b>24</b>	

**(f) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit</b>	<b>Status</b>
EDU 332	Educational Technology	2	C
EDU 336	Post Teaching Practice Evaluation/Remediation	2	C
EDU 314	Comparative Education	2	C
MTH 305	Complex Analysis II	3	C



PHY302	Modern Physics II	2	C
PHY 314	Numerical Computations	2	C
PHY 308	Electronics I	2	C
PHY305	Energy	1	C
PHY 312	Mathematical Methods for Physics I	3	C
	<b>Total Credit Units</b>	<b>19</b>	

**(g) Year IV**

**First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit</b>	<b>Status</b>
EDU 421	Guidance and Counselling	2	C
EDU 423	Measurement And Evaluation	2	C
EDU 435	Teaching Practice II	3	C
SED 413	Science, Technology and Society	2	C
PHY 403	Electrodynamics II	2	C
PHY 407	Solid State Physics II	3	C
PHY457	Environmental Physics	3	C
	<b>Total Credit Units</b>	<b>17</b>	

**(h)**

**Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit</b>	<b>Status</b>
EDU 412	Principles of Educational Management	2	C
EDU 420	Research Project	4	C
EDU	Special Education	2	C

426			
PHY 402	Nuclear Physics	3	C
PHY401	Elementary Particle Physics	3	C
	<b>Total Credit Units</b>	<b>14</b>	

### Course Content Specification

#### **GST 101: Use of English and Communication Skills I (2 C)**

Listening enabling skills, listening and comprehending comprehension, note taking and information retrieval. Including data, figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

#### **GST 102: Use of English and Communication Skills II (2 C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

#### **GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature

and his origin, man, environment and resources, Great Nigerian Scientists

**GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organised, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks and lectures, learning from T.V and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay, conclusion. How to write essays: Introduction, the craft of writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

**EDU 111: Foundations of Education (2 C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

**EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the

status of teachers in Nigeria, strategies for making teaching a profession.

**EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

**PHY 111: Elementary Mechanics (2 C)**

Physical quantities, standards and units; Kinematics: uniform velocity motion, uniformly acceleration motion; Dynamics: Newton's laws of motion; Newton's universal law of gravitation; Work, energy, conservation laws. Concept of mechanical equilibrium. Centre of mass and centre of gravity. Moment of a force; Rotational motion, angular momentum and torque; Total mechanical energy; Elasticity: Hooke's law, Young's, shear and bulk modulus; Hydrostatics: pressure, buoyancy, Archimedes' principle; Elements of hydrodynamics; Molecular properties of fluids: viscosity, surface tension, adhesion, cohesion, capillarity, drops and bubbles.

**PHY 113: Heat And Properties of Matter (2 C)**

Temperature and the Zeroth law of thermodynamics. Quantity of heat. First and second laws of thermo-dynamics. Heat transfer; Heat capacities; Latent heat; Gas laws. Isothermal and Adiabatic expansions; Carnot cycle; Application of kinetic theory of gases

**PHY 132: Electricity, Magnetism and Modern Physics (2C)**

Electrostatics: Coulomb's law, Gauss's law, potential and capacitance, dielectrics, production and measurement of static electricity. Current: Ohm's law, resistance and resistivity, heating. Galvanometers, Voltmeters and Ammeters; D.C. circuits: sources of emf and currents, Kirchoff's laws; Electrochemistry; The Earth's magnetic field; Magnetic fields induction, Faraday's and Lenz's laws;

Force on a current-carrying conductor. Biot-Savart law. Flemming's right and left-hand rules, motors and generators. Atomic structure; Production and properties of X-rays; Radioactivity; Photoelectric emission.

**PHY 124: Geometrical and Wave Optics (2 C)**

Geometrical Optics: law of reflection and refraction; Location of images: Plane and curved mirrors; Converging and diverging thin lenses; Thick lenses; Lens defects; Aberrations; The eye; Optical instruments. Simple Harmonic motion; Wave motion and wave types; Dispersion; Production of sound in strings and pipes resonance, applications; Simple description of diffraction and interference, applications to both light and sound waves; Polarisation of transverse waves.

**PHY 191: Introductory Practical Physics I (2 C)**

Graphs, Measurement, Error Analysis, Determination of Acceleration due to Gravity by Means of Simple Pendulum, Determination of force constant of a spiral spring, Determination of effective mass of a spiral spring and the constant, Determination of surface tension of water, Determination of specific latent heat of fusion of ice, Determination of the co-efficient of limiting static friction between two surfaces, Determination of the co-efficient of static friction on two surfaces using an inclined plane, Determination of Relative Density of kerosene using the specific Gravity Bottle, Determination of the Relative Density of a Granular substance not soluble in water using the specific gravity bottle.

**PHY 192: Introductory Practical Physics II (2 Units)**

Refraction through the glass block; Image formed by a concave mirror; Determination of the focal length of the convex mirror; Refraction through the triangular prism; Determination of the focal length of a converging lens and the refractive index of groundnut; Determination of resistance of resistors in series and in parallel in simple circuits; Determination of internal resistance of a dry cell using a potentiometer; To compare the E.M.F of cells using potentiometer; Determine the unknown resistance of a resistor using

Wheatstone Bridge; To determine the relationship between current through a Tungsten and a potential applied across it.

**MTH 122: Integral Calculus (2 Units)**

Fundamental theorem of calculus. Integration by parts, change of variable method, integration of rational functions, trigonometric integral, trigonometric substitutions. Numerical integration: Trapezoidal Method.

**MTH 133: Trigonometry (2 C)**

Trigonometric functions; Radian measure, law of sine and cosine, sum, differences and product formulas. Trigonometric identities, Inverse trigonometric functions, solutions of Trigonometric equations. Exponential and logarithmic functions, laws of exponents and a logarithm. Algebraic functions, polynomials, division algorithm, synthetic division, factor theorem, remainder theorem. Rational functions, asymptotes partial fractions.

**MTH 112: Differential Calculus (2 C)**

Real number: The number line, intervals, properties of absolute value. Solving inequalities sign chart. Function from  $\mathbb{R}$  to  $\mathbb{R}$ , domain range, graph, monotonically increasing, decreasing functions. Inverse functions. Composition of functions. Even and odd functions, periodic functions, Limits, convergence sequences. Limit of a function, left and right limits and continuity. Differentiability at a point and on an interval. Sum, product and quotient rule. Chain rule for inverse function. Implicit differential.

**MTH 142: Vectors and Geometry (2 C)**

Equations of lines and planes. Conic sections, circles parabola, hyperbola, ellipse. Vectors in  $\mathbb{R}^2$ ,  $\mathbb{R}^3$ , Scalar products. Vector product Triple products. Application to Geometry. The notion of displacement, speed, velocity and acceleration of a particle. Newton's laws of motions and applications to simple problems. Work, power, and energy. Application of the principle of conservation of energy to motion of particles and those involving elastic string and springs. Simple Harmonic motion. Resultant of any number of forces acting on a particle. Reduction of coplanar forces acting on a rigid body to a

force and a couple. Equilibrium of coplanar forces, parallel forces, couples. Laws of friction. Application of the principle of moments. Moment of Inertia of simple bodies. (Note: Vector approach should be used where necessary)

### **CHM 103: Introductory Physical Chemistry (2 E)**

Mole concepts and calculations based on it. Methods of expressing concentration. Chemical kinetics and equilibria and related calculations. Important applications of equilibria. PH, solubility products and solubility of ionic solids. Thermo-chemistry and simple calculations based on Hess's law. Electrochemistry and working of various cells.

Brief mention of corrosion, chemical thermodynamics,  $dG = dH - TdS$ .

### **GST 201: Nigerian Peoples and Culture (2 C)**

Nigerian history, culture and arts in pre-colonial times; Nigerians' perception of their world; culture areas of Nigeria and their characteristics; evolution of Nigeria as a political unit; indigene/settler phenomenon; concepts of trade; economic self-reliance; social justice; individual and national development; norms and values; negative attitudes and conducts (cultism and related vices); re-orientation of moral and national values; moral obligations of citizens; environmental problems.

### **GST 202: Philosophy and Logic (2 C)**

Fundamentals of logic and critical thinking; types of discourse; nature of arguments; validity and soundness; techniques for evaluating arguments; distinction between inductive and deductive inferences; etc. Illustrations from familiar texts, including literature materials, novels, law reports and newspaper publications.

### **GST 202: Fundamentals of Peace Studies and Conflict Resolutions**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between

Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

**EDU 231: Curriculum Theory And Practice (2 C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation.

**EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialisation:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.



**EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questing, Questions in Classroom: The teacher’s questions, the pupil’s questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical Environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-Visual in Teaching, Types of Audio-visual Aids and their uses.

**EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

**EDU 256: Physics Methods (2C)**

Developing a point of view in physics teaching structure and epistemological foundation of physics and implication for teaching, Strategies of teaching physics, Resources for physics teaching and laboratory management, Evaluation of physics teaching and learning, School physics curricular, Physics organisation, Projects.

**PHY 211: Mechanics I (2 C)**

Particle kinematics and dynamics, Work, energy and power, Angular momentum and torque, Newtonian gravitation, many particle systems, rigid body dynamics.

**PHY 202: Modern Physics I (2 C)**

Atomic structure, Charge quantisation, Mass spectra, the plum pudding model, Rutherford model and Bohr models of the atom, Hydrogen spectra, Magnetic moment and Angular momentum of an atom, Electron spin, Pauli exclusion principle and electronic configuration, X-ray spectra, Wave-particle duality, Nuclear structure: nomenclature, binding energy and stability, Radioactivity, The radioactive series, Accelerators, Detectors.

**PHY 203: Oscillations and Waves (3 C)**

Simple harmonic motion, Superposition of simple harmonic oscillations, Damped harmonic motion, Forced oscillations and resonance, Coupled oscillations, Wave motion, Waves at the boundary of two media, Superposition of waves.

**PHY 204: Electromagnetism (2 C)**

Macroscopic properties of dielectrics: polarisation, Gauss's law in a dielectric, the displacement vector, boundary conditions on  $\mathbf{D}$  and  $\mathbf{E}$ , dielectric strength and breakdown; Capacitor: capacitance, the parallel plate capacitor, effect of a dielectric, energy stored in a dielectric medium, capacitors in series and parallel, practical capacitors; Microscopic properties of dielectrics: microscopic picture of a dielectric in a uniform electric field, determination of local field, Clausius-Mossotti equation, behaviour of dielectric in alternating fields; Magnetism of materials: response of various substances to a magnetic field, magnetic moment and angular momentum of an atom,

diamagnetism and paramagnetism, Lamor precession, magnetisation of paramagnets, ferromagnetism, magnetic field due to a magnetised material, magnetic intensity, relationship between **E** and **H** for magnetic material, magnetic circuits.

**PHY 207: Thermodynamics (2 C)**

Basic concepts of thermodynamics; Measurement of temperature; The First Law of Thermodynamics; Entropy and the Second Law of Thermodynamics; Consequences of the first and second laws; Carnot engine; Combined first and second laws; Helmholtz and Gibb functions, Enthalpy, The thermodynamic potentials; phase transitions; Production of low temperatures and the Third Law of thermodynamics.

**PHY 209: Optics I (2 C)**

Nature of light: the corpuscular model, the wave model, light as an electromagnetic wave; Reflection and refraction of light: electromagnetic waves at the interface separating two media, idealisation of waves as light rays, Fermat's principle; Perception of light: human vision, colour vision; Polarisation of light: simple states of polarised light, principles of producing linearly polarised light, wave plates.

**PHY 220: Physics Laboratory I (2 C)**

Introduction to laboratory-I: Measurement; Introduction to laboratory-I: Error Analysis; To investigate the dependence of the period of a pendulum on length, amplitude and mass; Oscillations of a spring mass system and a torsional pendulum; A study of energy and momentum conservation principles; A study of coupled oscillations; Relations between wavelength and frequency of stationary waves; Young's modulus for a material by bending of beams; Measurement of low resistance using Carey Foster's Bridge; Variation of thermo E.M.F. with temperature; Frequency response of A.C. series circuits; Zener diode characteristics and zener as a voltage regulator; A study of transistor characteristic.

**MTH 211: Set Theory and Abstract Algebra (3 C)**

Set: Binary operations, mapping, equivalence relations integers: Fundamental theorem of arithmetic, congruence equations, Euler's function (n) Group Theory: Definition and examples of groups. Subgroups, coset decomposition, Lagrange's theorem. Cyclic groups. Homomorphisms, isomorphism. Odd and even permutations. Cayley's theorem. Rings: Definition and examples of rings. Commutative rings. Integral domain. Order, well-ordering principles. Mathematical induction.

**MTH 232: Elementary Differential Equation (3 C)**

Introduction, equation of first order and first degree, separable equations, homogeneous equations, exact equations, linear equations, Bernoulli's and Riccati equations. Applications to mechanics and electricity. Orthogonal and oblique trajectories. Second order equations with constant coefficients.

**EDU 321: Psychology of Learning (2 C)**

Definitions of psychology & learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – Skinner, Meaning of S – R, The laws of readiness, Exercise and effect; Punishment; Classroom application.

**EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process, The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instruction, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value.

**EDU 314: Comparative Education (2 C)**

Scope and meaning of Education, Examination of Significant Differences and Similarities in Education Policy and Practices in Selected Societies, Problems of Educational Development in Developing Countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**SED 305– Practicum in Science Teaching (3CU)**

Students are expected to carry out activities in their respective areas of specialisation as stated below.

**Agric Practicum**

Activities in Farm tools & Machinery, Methods in Farm Surveying, Management of Farm Animals, Construction of Egg candler & candling, Soil and Soil experiments, Rocks & Rock Formation, Floriculture.

**Biology**

Activities on Microscopy cell division, Construction of quarat, Ecosystem, Improvisation of necessary instrument in Biology e.g.

Rain gauge, ACC paper wind vane etc. Activities on genetical principles, Construction of Herbarium, Staffing of Animals, Skeleton

### **Physics**

Activities on Graphs & Data handling, Activity on measurement of Mass, Experiment on Mechanics, Experiments on light.

### **Chemistry**

Activities on separation Techniques, Preparation of standard solutions, Activities on volumetric Analysis, Qualitative analysis, Test for gases activities on Identification of rations.

### **Integrated Science**

Activities on Microscopy, Improvisation of an ecosystem, Activities on Energy transformation, Simple machines, Thermo dynamics, Test for gases, Separation techniques, Activities on Volumetric Analysis.

### **Mathematics**

Improvisation of Abacus Counters

Using improvised materials to teach shapes such as triangle, circle square etc.

Using simple games to teach elementary mathematics.

### **Computer Science**

Activities on computer games, Improvising computer, Activities on computer virus.

**Note:** The activities for each of the sciences listed above will include post teaching practice discussion and remediation.

### **EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice
- The lesson notes used during the teaching practice
- Assessment questions as well as the marking guides used
- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the Study Centre Director for:

- Evaluation
- Feedback, and
- Remediation.

The result of the overall processes should be communicated to the student from the Dean through the Study Centre Director.

### **PHY 301: Classical Mechanics II (3 Units)**

Motion under central conservative forces; scattering; Motion in non – inertial frames of reference, Generalised coordinates, Constraints, The Lagrange formulation of mechanics, Hamilton’s formulation of mechanics.

### **PHY 302: Modern Physics II (3 C)**

Properties of atomic orbits; Optical spectra of the hydrogen atom; Spontaneous and simulated emissions (lasers and masers); Spectra of alkali metals; Quantum effects; Vector model of the atom: j-j couplings. Bohr magneton; Space quantisation; Stern Gerlach experiment; Zeeman Effect; Hyperfine structure and isotopes and nuclear spin; Nuclear spin number; Molecular spectroscopy: rotation, vibration-rotation, electronic. X-ray spectra; Microwave methods; Resonance phenomena, ESR, NMR; Optical pumping and Mossbauer scattering.

**PHY 303: Special Relativity (3 C)**

Einstein's postulates and Lorentz transformation; Consequences of transformations of momentum and energy; Experimental verification of special relativity; Velocity addition theorem and Doppler effect; Electromagnetic 4-vector; Transformation of  $\mathbf{E}$  and  $\mathbf{H}$ ; Lorentz force.

**PHY 306: Optics (2 Units)**

Interference by division of wave front; Interference by division of amplitude; Interferometry; Fresnel diffraction; Fraunhofer diffraction; Diffraction and resolution.

**PHY 305: Energy (2 C)**

Energy and power: principles, demands and outlook, transformation of energy and its costs; Thermal pollution; Electrical energy from fossil fuels; Hydro-electric generation: principles and problems, capacity, storage, reserves, efficiency and environmental effects; Electrical energy nuclear reactors: energy in future breeder reactors, fusion power, solar power, geothermal power, tidal power, etc.

**PHY 307: Solid State Physics I (3 C)**

Crystal structure of solids; Crystal binding; X-ray diffraction in crystals, applications; Thermal properties of the crystal lattice; Elastic properties; Lattice vibrations: phonons; Free-electron theory of metals; Motion of electrons in periodic fields; Hall effect; Energy bands; Semiconductors; Superconductivity.

**PHY 308: Electronics I (3 C)**

Amplifiers: Classification of amplifiers, equivalent circuit of transistor, operating point and bias stability, small signal amplifier, r-f amplifiers; Oscillators: negative feedback, positive feedback, LC oscillators, RC oscillators; Power supply: power source, dc power unit, performance of rectifier, filter circuits, regulation of output voltage; Linear integrated circuits: the Op Amp and its applications, amplifiers and voltage regulators.

**PHY 309: Quantum Mechanics I (3 C)**

Experimental basis of quantum theory: blackbody radiation, and Planck's hypothesis, electron and quanta; Operators; Postulates of



Quantum Mechanics; Correspondence principle, Schrodinger equations and their solutions; Applications: one-dimensional box problem, potential well and bound states, potential barrier, the tunnel effect; The harmonic oscillator.

**PHY 364: Electronics II (3 C)**

Multistage amplifiers; Power amplifiers; Classes A, B, C, Active and Passive Filters; Power systems: Use of transistors in stabilised power supplies; Field effect transistors.

**PHY 311: Kinetic Theory and Statistical Mechanics (2 Units)**

Ideal gases; Transport phenomena; Brownian motion; Real gases; Basic concepts of Statistical Mechanics; the partition function, entropy and probability, equipartition of energy, classical statistics, quantum statistics.

**EDU 421: Guidance and Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counselling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counselling Service:- Nature, Purpose and Theories of Counselling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counseling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational

considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**PHY 402: Nuclear Physics (3 C)**

Basic nuclear concepts: structure, size, nuclear masses, nuclear forces; Nuclear scattering: nuclear models; Energy spectra of alpha and beta decays; Fermi theory of  $\beta$ -decay; Emission; internal conversion; Nuclear reactions; Interaction of nuclear radiation with matter.

**PHY 405: Electronics III (3 C)**

Number systems and codes; Fundamentals of Boolean algebra and flip-flops; Registers counters, memory circuits and analogue/digital converters; Electronic instruments.

**PHY 407: Solid State Physics II                      Pre-Requisite: PHY 307 (2 C)**

Dielectric properties; Magnetism: paramagnetism and diamagnetism, ferromagnetism and anti-ferromagnetism. Magnetic resonance; Imperfections in solids.

**PHY 409: Elementary Particle Physics (2 C)**

Elementary particles: types; Conservation laws; Particle classification. Strong, electro-magnetic and weak interactions; Particle resonances; Symmetry models: SU (2), SU (3), etc.

**PHY 455: Lower Atmospheric Physics (3 C)**

Atmospheric composition and structure. Thermodynamics of water and air. Hydrostatic stability and convection; tephigrams; gradient winds. Radiation in the atmosphere: absorption, scattering; pressure / collision; Doppler; Radiometric quantities, definitions and measurements; Radioactive transfer equation.

### PHY 457: Environmental Physics (3 Units)

Satellite orbits; remote sensing; processing and resolution of satellite images; applications of remote sensing data; structure and composition of earth's atmosphere; energy balance; greenhouse effect and global warming; atmospheric motion, pressure gradient and thermal gradient winds; global weather and climate patterns; environmental modeling; environmental risk – benefit analysis.

### B.Sc. (Ed) Chemistry

To be eligible for the award of B.Sc. (Ed.) Chemistry, a student must have passed a minimum of 143 and 108 credit units for the four year and three year degree programmes respectively. That is:

- For a four year degree course, a minimum of 143 units will be required for graduation.
- For a direct three year course, a minimum of 108 units will be required for graduation.
- At the commencement of the programme, each student is furnished with the information specifying the requirements for the award of the degree.
- Students must pass all core and GST courses.

**Table 10 B.Sc. (Ed) Chemistry**

**(a) Year I**

**First Semester**

Course Code	Course Title	Unit(s)	Status
GST 101	Use of English and Communication Skills II	2	C
GST107	The Good Study Guide	2	C
EDU111	Foundations of Education	2	C
CHM101	Introductory Inorganic Chemistry	2	C
CHM103	Introductory Physical Chemistry	2	C
CHM191	Introductory Practical Chemistry	1	C
BIO191	General Practical Biology I	2	C
BIO101	General Biology 1	2	C
MTH101	General Mathematics	3	C
	<b>Total Credit Units</b>	18	

**(b) Second Semester**

Course Code	Course Title	Unit(s)	Status
GST 102	Use of English and Communication Skills II	2	C
EDU 112	Professionalism in Teaching	2	C
EDU 114	History of Education in Nigeria	2	C
CHM 102	Introductory Organic Chemistry	2	C
BIO 102	General Biology II	2	C
BIO 192	General Practical Biology II	2	C
CHM 192	Introductory Practical Chemistry II	2	C
MTH104	Elementary Mathematics II	3	C
	<b>Total Credit Units</b>	<b>17</b>	

**(c) Year II First Semester**

Course Code	Course Title	Unit(s)	Status
GST 201	Nigerian Peoples and Culture	2	C
EDU 231	Curriculum Theory and Practice	2	C
EDU 233	General Teaching Methods	2	C
CHM 205	Inorganic Chemistry II	2	C
CHM 201	Physical Chemistry II	2	C
CHM 204	Structure and Bonding	2	C
MTH 281	Mathematical Method	2	C
BIO 201	Genetic I	2	C
BIO 203	General Physiology 1	2	C
	<b>Total Credit Units</b>	<b>18</b>	

**(d) Second Semester**

Course Code	Course Title	Unit(S)	Status
GST 203	Introduction to Philosophy and Logic	2	C
GST202	Peace Studies and Conflict Resolution	2	C
EDU 212	Sociology of Education	2	C
EDU 252	Chemistry Methods	2	C
EDU 214	Philosophy of Education	2	C

CHM 202	Analytical Chemistry I	2	C
CHM 203	Organic Chemistry II	2	C
	<b>Total Credit Units</b>	<b>14</b>	

**(e) Year III**

**First Semester**

Course Code	Course Title	Unit(s)	Status
GST301	Entrepreneurship Studies	2	C
EDU 335	Teaching Practice I	3	C
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research Methods In Education	3	C
CHM 301	Physical Chemistry III	3	C
CHM 307	Atomic and Molecular Structure and Symmetry	3	C
CHM 315	Carbohydrate Chemistry	2	C
CHM 302	Polymer Chemistry	2	C
CHM 305	Organic Chemistry III	3	C
	<b>Total Credit Units</b>	<b>23</b>	

**(f)**

**Second Semester**

Course Code	Course Title	Credit Unit(s)	Status
EDU302	ICT in Education	2	C
EDU 332	Educational Technology	2	C
EDU 314	Comparative Education	2	C
EDU336	Post Teaching Practice Evaluation	3	C
SED 305	Practicum in Science Teaching	3	C
CHM 303	Inorganic Chemistry III	3	C
CHM 309	Organic Spectroscopy	2	C
CHM 306	Instrumental Methods of Analysis	2	C
	<b>Total Credit Units</b>	<b>19</b>	

**( g )Year IV****First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU 421	Guidance and Counselling	2	C
EDU 423	Measurement and Evaluation	2	C
EDU 435	Teaching Practice II	3	C
CHM 407	Reaction Kinetics	3	C
CHM 413	Analytical Chemistry II	2	C
CHM 423	Coordination Chemistry	3	C
CHM 409	Electrochemistry	2	C
CHM421	Heterocyclic Chemistry	2	C
	<b>Total Credit Units</b>	<b>19</b>	

**( h ) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU412	Principles of Educational Management	2	C
EDU420	Research Project	4	C
EDU426	Special Education	2	C
CHM406	Nuclear And Radio- Chemistry	2	C
CHM416	Organic Synthesis	2	C
CHM417	Industrial Chemistry Process II	3	C
	<b>Total Credit Units</b>	<b>15</b>	

**Course Content Specification****GST 101: Use of English and Communication Skills I (2C)**

Listening enabling skills, listening and comprehending comprehension, note taking and information retrieval. Including data, figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and comprehension passages with

tables, scientific texts. Reading for interpretation and critical evaluation.

**GST 102: Use Of English and Communication Skills II (2C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

**GST 103: Study Skills (0 C)**

Skills for studying, how to study, use of library, preparing for examinations, revising for examinations, studying for different kinds of examination, essay-type examination, studying for multiple choice and short answer examinations.

**GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature and his origin, man, environment and resources, Great Nigerian Scientists.

**GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organized, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks and lectures, learning from T.V and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good



essay, conclusion. How to write essays: Introduction, the craft of writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

### **EDU 105: Introduction to Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

### **EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession

### **EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

**CHM 101: Introduction to Inorganic Chemistry (2 C)**

Hypothesis, theory and law with appropriate illustrations, Nature of matter – 3 states of matter, Atomic structure, electronic energy levels and orbital, Periodic classification of elements and its relationship to their electronic configurations, Chemical bonding, Survey of properties and trends in groups I, II, IV, VI and transition metal,

**CHM 103: Introduction to Physical Chemistry (2 C)**

Mole concepts and calculations based on it, methods of expressing concentrations, Chemical Kinetics and equilibrium, and related calculations, Important applications of equilibrium – pH, solubility products and solubility of ionic solids, Thermo chemistry and simple calculations based on Hess's law, Electrochemistry and working of various cells, Brief mentions of corrosion; chemical thermodynamics;  $\Delta G = \Delta H - T\Delta S$ .

**CHM 102: Introductory Organic Chemistry (2 C)**

Simple reactions of hydrocarbons, alcohols and acids, petroleum chemistry, oils and fats. Hydrogenation of oils. Polymer and biological important molecules.

**CHM 191: Introduction to Practical Chemistry (2 C)**

Practicals based of CHM 121 and 111: Cations and anions – identification, Acid base titrations, Redox reactions and determinations

**BIO 101: General Biology I (2 Units)**

Characteristics of living things; cell as the basic unit of living things, cell structure, organization, cellular organelles, tissues, organs and systems. Classification of living things, general reproduction and concept of inter-relationships of organism. Heredity and evolution. Elements of ecology (introduction) and habitats.

**BIO 102 : General Biology II (2 Units)**

Systematic studies of diversity of life including monera, Protista, plants (Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and angiosperms) and animals (Protozoa, Platyhelminthes, Annelids, Arthropods, Fishes, Amphibians, Reptiles, Birds and Mammals)

based on similarities and differences in external morphology. Taxonomic divisions of plant and animal kingdoms. Ecological adaptations of these forms.

**BIO 191: General Biology Practical I (2 Units)**

What practical work in biology involves. Laboratory organisation. Handling common laboratory equipment. Microscopic handling and maintenance. Making microscopic measurements. Procuring animal materials for practicals. Killing, preserving and maintaining animal materials. Procuring plant materials. External features of plants (differences and similarities). Preparation of temporary slides. Preparation of stains and reagents. Techniques for microbial culture and grain staining. Setting up demonstration for physiological processes in plants. Setting up apparatus for demonstrating physiological processes in animals. Preparation required for dissection.

**BIO 192: General Biology Laboratory II (2 Units)**

Observation and description of the morphological and diagnostic features as well as the differences among the different phyla of the plant, animal, archebacteria, eubacteria, fungi and protista kingdoms. Identification of the taxonomic hierarchy of the members of the above groups. Study of the structure and functions of their parts and habitats specifications

**BIO 207: Lower Invertebrates (2 Units)**

Systematic approach to invertebrates morphology and levels of organisation. Classification of Protozoa, Rhizopoda, Apicomplexa, Sarcomastigophora, Ciliophora, Parazoa; Porifera. Metazoan; Cnidarian, Platyhelminthes, Nematode, Annelida, Mollusca, Arthropoda, Echinodermata with emphasis on the differences and similarities among the groups; adaptive features to mode of life and their economic importance.

**GST 201: Nigerian Peoples and Culture (2 C)**

Nigerian history, culture and arts in pre-colonial times; Nigerians' perception of their world; culture areas of Nigeria and their characteristics; evolution of Nigeria as a political unit;

indigene/settler phenomenon; concepts of trade; economic self-reliance; social justice; individual and national development; norms and values; negative attitudes and conducts (cultism and related vices); re-orientation of moral and national values; moral obligations of citizens; environmental problems.

**GST 202: Philosophy and Logic (2 C)**

Fundamentals of logic and critical thinking; types of discourse; nature of arguments; validity and soundness; techniques for evaluating arguments; distinction between inductive and deductive inferences; etc. Illustrations from familiar texts, including literature materials, novels, law reports and newspaper publications

**EDU 231: Curriculum Theory and Practice (2 C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation

**EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialisation:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education,

Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

**EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questing, Questions in Classroom: The teacher's questions, the pupil's questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-visual in teaching, Types of Audio-visual Aids and their uses.

**EDU 204: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in

modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

**EDU 252: Chemistry Methods (2 C)**

Definition of Science, Myths and Dogmas about Science Education, The aims and historical Context of Science, The Challenge of Science Teaching, The Social Dimension of Science and Barriers to Effective Communication in Teaching, Application of some Teaching Methods, lesson Notes and its Preparation, Content, The use of Chemistry Laboratory, Laboratory , Laboratory Organisation and management, Teaching Science in the face of Scarcity of Chemicals/ Equipment, The language of science and science Teaching, Learning Theories, Piaget's' Theory and Application of Learning, Theories of Science Teaching.

**CHM 202: Analytical Chemistry I (3 C)**

Theory of errors, statistical treatment of data; Theory of sampling, chemistry methods of analysis including volumetric (acid base,, oxidation – reduction, precipitation and compleximetry); Physicochemical methods (Optical methods of analysis – UV/V), separation methods. PH notation and buffer solutions. Gravimetry solubility product and its application to separation methods of metals.

**CHM 201 Physical Chemistry II (3 C)**

Kinetic theory of gases, behaviour of real gases; the laws of thermodynamic entropy and free energy, reactions and phase equilibrium; reaction rate laws for gases where the concentration of the reactions are the same. Mechanism and theories of animalcular reactions.

**CHM 204: Structure and Bonding (3 C)**

Idea of quantum states. Orbital shape and energy, simple valence theory. Electron repulsion theory; atomic spectra. The structure and chemistry of some representative main group element compounds.

**CHM 203: Organic Chemistry II (3 C)**

Factors affecting structure and physical properties of organic compounds; factors affecting availability of electrons, stereochemistry; energy of activation and free radical substitution reactions in alkenes. Functional group chemistry. Electrophilic and nucleophilic substitution reactions. Aromaticity. Various types of organic reactions; e.g. addition, free radical, elimination and substitution reactions.

**BIO 201: Genetics 1 (2 C)**

Hereditary and non-hereditary characteristics. Probability and tests of goodness of fit. Quantitative inheritance, variation in genome structure, introduction to population – genetics. Physical and chemical nature of genetic materials. Protein synthesis.

**BIO 203: General Physiology 1 (2 C)**

Physical and chemical processes in animal and plant physiology. Basic elements of respiratory, photosynthesis, transportation or circulation, reproduction, germination, growth hormones and enzymology.

**BIO 207: Lower Invertebrates (2 C)**

Systematic approach to invertebrates morphology and levels of organization. Classification of Protozoa, Rhizopoda, Apicomplexa, Sarcostigophora, Ciliophora, Parazoa; Porifera. Metazoan; Cnidaria, Platyhelminthes, Nematode, Annelida, Mollusca, Arthropoda, Echinodermata with emphasis on the differences and similarities among the groups; adaptive features to mode of life and their economic importance.

**BIO 203: General Physiology I (2 C)**

Physical and chemical processes in animals and plants; diffusion, osmotic pressure and osmolarity. Water potential, turgor, plasmolysis, Gibbs-Donnan relationship. Gas exchange, partial pressures (Tension), Hydrogen-ion concentration (Ph). Henderson Hasselbach equation, buffers in physiology. Nutrition; photo-autotrophism, heterotrophism (essential requirements of each), Respiration and photosynthesis; RQ

and QIO in relation to metabolism, photosynthesis, oxygen and carbon dioxide exchange.

**BIO 204: Biological Techniques (2 C)**

The course is geared towards introducing students to scientific methods using topics to illustrate ways and means of Biological research. Types of microscopes and their uses. Preparation of microscopic slides. Examination of materials. Dissection guides. Microtomy and hand sectioning. Photometry, Colorimetry. Chromatography. Conductometry. The course will also introduce students to what is research and the techniques of writing scientific reports through developing critical thinking and testing hypotheses, evaluating original research papers and expressing ideas.

**EDU 321: Psychology of Learning (2 C)**

Definitions of psychology & learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application

**EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process, The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instructional, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.



**EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomized Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 314: Comparative Education (2 C)**

Scope and meaning of Education, Examination of Significant Differences and Similarities in Education Policy and Practices in Selected Societies, Problems of Educational Development in Developing Countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**Note:** The activities for each of the sciences listed above will include post teaching practice discussion and remediation. (EDU336)

**EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice
- The lesson notes used during the teaching practice
- Assessment questions as well as the marking guides used

- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the Study Centre Director for:

- Evaluation
- Feedback, and
- Remediation.

The result of the overall processes should be communicated to the student from the Dean through the Study Centre Director.

### **CHM 311: Physical Chemistry III (3 C)**

Introduction to key thermodynamic functions and applications. First, second and third laws of thermodynamics, internal energy of a system: the Carnot heat engine; the concept of entropy and the criteria for spontaneity and equilibrium for physical and social processes including single and multiple comparison system. The concept of reversibility and irreversibility, free energy derivations, Maxwell relations, Gibbs functions. Equilibrium thermodynamic as (ideal solutions and vapour fugacity concepts). Properties of electrolytes (colligative properties and phase rule. Introduction to statistical thermodynamics

### **CHM 333: Inorganic Chemistry III (3 C)**

The noble gases. Hydrogen, electronic structure and general properties and comparative study of Group IA Group IIA elements. Chemistry of Boron: Carbon and Silicon, nitrogen and phosphorous oxygen and sulphur. The halogens, transition and elements. The halogens, transition and element, separation of metals coordination chemistry, Ligand and crystal field theories, Introduction to radio chemistry, radio activity and the periodic table.

### **CHM 312: Atomic and Molecular Structure and Symmetry (3)**

Schrödinger equation. Helium atom, ground and excited states, spin and Pauli principles, hydrogen molecule, comparison of molecular

orbital and Valence bond theory; concepts of resonance and configuration of orbital for historic molecular, Walsh rules. Rotational, vibration bond length and angles brief mention of other methods, atomic spectra, Russell-Saunders coupling, orbital and spin angular momentum. Use of symmetry in chemistry. Heat capacities of solids.

**CHM 316: Applied Spectroscopy (2 C)**

Principles and applications of UV, IR, NMR and Mass spectroscopy the determination and elucidation of structure of organic compounds.

**CHM 311: Polymer Chemistry (2 C)**

The nature of Polymer nomenclature. Outline of sources of raw materials for polymers; Polymerisation process, condensation polymerisation in details. Solubility and solution properties of polymers. Structures and properties of polymers. Fibre forming polymers. Definition of colloid and history of colloid development. Types of colloids. Polymers, Proteins, Gels, Association colloids, Detergency.

**CHM 320: Industrial Chemical Technology I (2 C)**

Heat transfer and Mass transfer processes. Unit operations. Chemical technology equipment.

**CHM 321: Organic Chemistry III (3 C)**

Alcohols and their reactions. Ethers and Epoxide. Carboxylic acids and their derivatives. Aldehydes and ketones. Carbanion I and B – unsaturated compounds. Polyfunctional compounds. Heterocyclic chemistry.

**CHM 322: Instrumental Methods of Analysis (2 C)**

Spectroscopic techniques, physicochemical optical; flame and X-ray methods. Fluorescence method, magnetic resonance and electron spin resonance. Refer chemistry and interferometry. Florimetry, poargraphy calorimetry.

**BIO 305 : Molecular Biology (2C)**

Genetics studies of microorganism, metabolic pathways, genes and chromosomes, nucleic acids (RNA & DNA), replication, transcription, gene expression and sequencing, protein synthesis, genotype, genetic code.

**EDU 421: Guidance And Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counseling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counseling Service:- Nature, Purpose and Theories of Counseling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counseling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Students organisation and participation in School Administration, Principle of planning, School finance and accounting

system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

### **EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, behavioral, cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

### **CHM 402: Theory of Molecular Spectroscopy (2 C)**

Quantum theory of rotation and vibration. Theory of microwave, IR, Raman, UV, Visible and NMR spectroscopy. General introduction to electron spin resonance, Mossbauer effect, nuclear quadrupole resonance and other modern techniques.

### **EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator

### **EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**CHM 411: Reaction Kinetics (3 C)**

Review of first, second and third order rate equations . Rate constants , and equilibrium constant collision theory, transition state theory, reaction coordinates. Unimolecular reaction theory, bimolecular reaction mechanism: Chain reaction mechanisms; catalysis and heterogeneous reactions. Photochemical reactions mechanism.

**CHM 413: Analytical Chemistry II (2 C)**

Theory of error-significance round correlation tests. Potentiometer and PH titrations. Conductometric methods ,electrolytic methods, radiochemical methods. Chromatography Calorimetry.

**CHM 414: Nuclear and Radiochemistry (2 C)**

Natural radioactivity, fusion, fission, decay process, nature of radiation. Nuclear models, energetic of nuclear reaction. Principles and measurement of radioactivity. Applications of radioactivity. Radiation Hazards.

**CHM 421: Statistical Thermodynamics (3 C)**

Pre-requisite-CHM301 Maxwell-Boltzmann statistics; calculation of thermodynamic properties; partition functions; heat capacities; entropy; equilibrium constants; use of spectroscopic data transition state theory; quantum effects.

**CHM 428: Polymer Chemistry II (2 C)**

Polymerisation mechanisms; detailed treatment of addition polymerisation. Stereospecific polymerisation. Copolymerisation. Phase systems for polymerisation. Industrially important thermoplastic and thermosetting polymers: Polyurethanes. Rubber elasticity. Mechanical properties of polymers. Analysis and testing of polymers. Degradation of polymers.

## CHM 432: Coordination Chemistry (2 C)

Definition, Recognition and Applications of Coordination compounds. Nomenclature, Coordination formula and Isomerism in complexes. Stereochemistry of complex molecules; Theories of structures and bonding. Physical methods of structural investigation. Magnetic properties. Absorption and Vibrational spectra. The spectrochemical series. The Nephelauxetic series and the Jahn-Teller distortions. Stabilisation of unusual oxidation states by complex formation. Thermodynamic stability of complex compounds, the stability constant, the chelate effect. Preparation and reactions complexes. Kinetics and Mechanisms.

### BSc. (Ed) Integrated Science

#### Graduation Requirement

- The B.Sc (Ed) Integrated Science is structured to run for a minimum of four years and maximum of eight years for students starting at 100 level or minimum of three years and maximum of six years for students entering at 200 level.
- To be eligible for the award of the B.Sc. (Ed) Hons. Integrated Science, a student must have passed a minimum of 127 and 93 credit units for the four year and three year degree programme respectively.

**Table 11: BSc. (Ed) Integrated Science**

(a) Year I

First<sup>t</sup> Semester

Course Code	Course Title	Credit Unit (s)	Status
GST 101	Use of English and Communication Skills I	2	C
GST 107	The Good Study Guide	2	C
EDU 111	Foundations of Education	2	C
PHY 111	Elementary Mechanics	2	C
PHY 191	Introductory Practical Physics I	2	C
BIO 101	General Biology I	2	C
CHM 101	Introductory Inorganic Chemistry 1	2	C
CIT 101	Computers in Society	2	C

	<b>Total</b>	<b>16</b>	
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**( b ) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit (s)</b>	<b>Status</b>
GST 102	Use of English and Communication Skills II	2	C
EDU 112	Professionalism in Teaching	2	C
EDU 114	History of Education in Nigeria	2	C
PHY 124	Geometrical and Waves Optics	2	C
PHY 192	Introductory Practical Physics II	2	C
PHY 132	Electricity, Magnetism and Modern Physics	2	C
BIO 102	General Biology II	2	C
CHM 102	Introductory Organic Chemistry	2	C
MTH 142	Vectors and Geometry	2	C
	<b>Total Credit Units</b>	<b>18</b>	

**(c) Year II First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit (s)</b>	<b>Status</b>
GST 201	Nigerian Peoples and Culture	2	C
EDU 231	Curriculum Theory and Practice	2	C
EDU 233	General Teaching Methods	2	C
CHM 203	Organic Chemistry II	2	C
CHM 205	Inorganic Chemistry II	3	C
BIO 201	Genetic I	2	C
BIO 203	General Physiology I	2	C
	<b>Total</b>	<b>15</b>	



**( d ) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 202	Fundamentals of Peace Studies and Conflict Resolutions	2	C
GST 203	Introduction to Philosophy and Logic	2	C
EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
EDU 254	Integrated Science Methods	2	C
PHY 202	Modern Physics	2	C
BIO 202	Introduction to Ecology	2	C
EPS 223	Entrepreneurship Education I (Theory)	2	C
<b>Total Credit Units</b>		<b>16</b>	

**( e ) Year III First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit (s)</b>	<b>Status</b>
GST 301:	Entrepreneurship Studies	2	C
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research Methods in Education	2	C
EDU 335	Teaching Practice I	3	C
CHM 311	Analytical Chemistry I	3	C
CHM 342	Electrochemistry	2	C
BIO 301	Genetic II	3	C
<b>Total Credit Units</b>		<b>17</b>	

**( f ) Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit (s)</b>	<b>Status</b>
SED 305	Practicum in Science Teaching	2	C
EDU 332	Educational Technology	2	C
EDU 314	Comparative Education	2	C
EDU 336	Post Teaching Practice	2	C

	Evaluation/Remediation		
PHY 308	Electronics I	3	C
BIO 304	General Ecology	2	C
	<b>Total Credit Units</b>	<b>13</b>	

**( g ) Year IV**

**First Semester**

Course Code	Course Title	Credit Unit (s)	Status
EDU 421	Guidance and Counselling	2	C
EDU 423	Measurement and Evaluation	2	C
EDU 435	Teaching Practice II	3	C
PHY 302	Modern Physics II	3	C
CHM 314	Environmental Chemistry	2	C
BIO 305	Molecular Biology	3	C
	<b>Total Credit Units</b>	<b>15</b>	

**( h )**

**Second Semester**

Course Code	Course Title	Credit Unit (s)	Unit
EDU 412	Principles of Educational Management	2	
EDU 420	Research Project	4	
EDU426	Special Education	2	
PHY 311	Kinetic Theory and Statistical Mechanics	2	
PHY 308	Electronics I	3	
CHM 311	Petroleum Chemistry	2	
BIO 307	Evolution	2	
	<b>Total Credit Units</b>	<b>17</b>	

**Course Content Specification**

**GST 101 : Use Of English and Communication Skills I (2C)**

Listening enabling skills, listening and comprehending comprehension, note taking and information retrieval. Including data, figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in

narratives and expository. Reading and comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

**GST 102: Use of English and Communication Skills II (2 C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

**GST 103: Study Skills (2 C)**

Skills for studying, how to study, use of library, preparing for examinations, revising for examinations, studying for different kinds of examination, essay-type examination, studying for multiple choice and short answer examinations.

**GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature and his origin, man, environment and resources, Great Nigerian Scientists.

**GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organized, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks& lectures, learning from T.V and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay, conclusion. How to write essays: Introduction, the craft of writing, the advantages of treating essay writing as a craft, making

your essay flow, making a convincing case, the experience of writing. Preparing for examination.

**EDU111: Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

**EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession.

**EDU 114: History Of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

**PHY 111: Elementary Mechanics (2 C)**

Physical quantities, standards and units; Kinematics: uniform velocity motion, uniformly acceleration motion; Dynamics: Newton's laws of motion; Newton's universal law of gravitation; Work, energy, conservation laws. Concept of mechanical equilibrium.

Centre of mass and centre of gravity. Moment of a force; Rotational motion, angular momentum and torque; Total mechanical energy; Elasticity: Hooke's law, Young's, shear and bulk modulus; Hydrostatics: pressure, buoyancy, Archimedes' principle; Elements of hydrodynamics; Molecular properties of fluids: viscosity, surface tension, adhesion, cohesion, capillarity, drops and bubbles.

**PHY 132: Electricity, Magnetism and Modern Physics (2 C)**

Electrostatics: Coulomb's law, Gauss's law, potential and capacitance, dielectrics, production and measurement of static electricity. Current: Ohm's law, resistance and resistivity, heating. Galvanometers, Voltmeters and Ammeters; D.C. circuits: sources of emf and currents, Kirchoff's laws; Electrochemistry; The Earth's magnetic field; Magnetic fields induction, Faraday's and Lenz's laws; Force on a current-carrying conductor. Biot-Savart law. Flemming's right and left-hand rules, motors and generators. Atomic structure; Production and properties of X-rays; Radioactivity; Photoelectric emission.

**PHY 191: Introductory Practical Physics I (2 C)**

Graphs, Measurement, Error Analysis, Determination of Acceleration due to Gravity by Means of Simple Pendulum, Determination of force constant of a spiral spring, Determination of effective mass of a spiral spring and the constant, Determination of surface tension of water, Determination of specific latent heat of fusion of ice, Determination of the co-efficient of limiting static friction between two surfaces, Determination of the co-efficient of static friction on two surfaces using an inclined plane, Determination of Relative Density of kerosene using the specific Gravity Bottle, Determination of the Relative Density of a Granular substance not soluble in water using the specific gravity bottle.

**BIO 101: General Biology 1 (2 C)**

Characteristics of living things; cell as the basic unit of living things, cell structure, organization, cellular organelles, tissues, organs and systems. Classification of living things, general reproduction and concept of inter-relationships of organism. Heredity and evolution. Elements of ecology (introduction) and habitats.

**BIO 102: General Biology II (2 C)**

Systematic studies of diversity of life including monera, protista, plants (Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and angiosperms) and animals (Protozoa, Platyhelminthes, Annelids, Arthropods, Fishes, Amphibians, Reptiles, Birds and Mammals) based on similarities and differences in external morphology. Taxonomic divisions of plant and animal kingdoms. Ecological adaptations of these forms.

**MTH 133: Trigonometry (2 C)**

Trigonometric functions; Radian measure, law of sine and cosine, sum, differences and product formulas. Trigonometric identities, Inverse trigonometric functions, solutions of Trigonometric equations; graph of trigonometric functions.

**MTH 102: Introductory Statistics (2 C)**

Measures of Central Tendency and dispersion, (grouped and ungrouped); mean:- arithmetic and geometric, harmonic, median, mode quartiles, deciles, modes, relative and absolute dispersion, sample space and events as sets. Finite probability space properties of probability. Statistical independence and conditional probability. Tree diagram. Bayes theorem. Discrete and continuous random variables. Expectation, independent Bernoulli trials. Binomial, Poisson and Normal distributions. Normal approximation to binomial and Poisson distribution, Hyper geometric.

**MTH 112: Differential Calculus (2 C)**

Real number: The number line, intervals, properties of absolute value. Solving inequalities sign chart. Function from  $\mathbb{R}$  to  $\mathbb{R}$ , domain range, graph, monotonically increasing, decreasing functions. Inverse functions. Composition of functions. Even and odd functions, periodic functions, Limits, convergence sequences. Limit of a function, left and right limits and continuity. Differentiability at a point and on an interval. Sum, product and quotient rule. Chain rule for inverse function. Implicit differential.

**MTH 142: Vectors and Geometry (2 C)**

Equations of lines and planes. Vectors in  $\mathbb{R}^2$ ,  $\mathbb{R}^3$ , Scalar products. Vector product Triple products. Application to Geometry.

**CHM 103: Introductory Physical Chemistry I (2 C)**

Mole concepts and calculations based on it, methods of expressing concentrations, Chemical Kinetics and equilibrium, and related calculations, Important application of equilibrium – pH, solubility products and solubility of ionic solids, Thermo chemistry and simple calculations based on Hess's law, Electrochemistry and working of various cells, Brief mentions of corrosion; chemical thermodynamics;  $\Delta G = \Delta H - T\Delta S$

**CHM 101: Introductory Inorganic Chemistry I (2 C)**

Hypothesis, theory and law with appropriate illustrations, Nature of matter – 3 states of matter, Atomic structure, electronic energy levels and orbital. Periodic classification of elements and its relationship to their electronic configurations, Chemical bonding, Survey of properties and trends in groups I, II, IV, VI and transition metal,

**CHM 102: Introductory Organic Chemistry (2 C)**

Simple reactions of hydrocarbons, alcohols and acids, petroleum chemistry, oils and fats. Hydrogenation of oils. Polymer and biological important molecules.

**PHY 124: Geometrical and Wave Optics (2 C)**

Geometrical Optics: law of reflection and refraction; Location of images: Plane and curved mirrors; Converging and diverging thin lenses; Thick lenses; Lens defects; Aberrations; The eye; Optical instruments. Simple Harmonic motion; Wave motion and wave types; Dispersion; Production of sound in strings and pipes resonance, applications; Simple description of diffraction and interference, applications to both light and sound waves; Polarisation of transverse waves.

**PHY 113: Heat and Properties of Matter (2 C)**

Temperature and the Zeroth law of thermodynamics. Quantity of heat. First and second laws of thermo-dynamics. Heat transfer; Heat capacities; Latent heat; Gas laws. Isothermal and Adiabatic expansions; Carnot cycle; Application of kinetic theory of gases.

**PHY 192: Introductory Practical Physics II (2 C)**

Refraction through the glass block; Image formed by a concave mirror; Determination of the focal length of the convex mirror; Refraction through the triangular prism; Determination of the focal length of a converging lens and the refractive index of groundnut; Determination of resistance of resistors in series and in parallel in simple circuits; Determination of internal resistance of a dry cell using a potentiometer; To compare the E.M.F of cells using potentiometer; Determine the unknown resistance of a resistor using Wheatstone Bridge; To determine the relationship between current through a Tungsten and a potential applied across it.

**GST 201: Nigerian Peoples and Culture (2 C)**

Nigerian history, culture and arts in pre-colonial times; Nigerians' perception of their world; culture areas of Nigeria and their characteristics; evolution of Nigeria as a political unit; indigene/settler phenomenon; concepts of trade; economic self-reliance; social justice; individual and national development; norms and values; negative attitudes and conducts (cultism and related vices); re-orientation of moral and national values; moral obligations of citizens; environmental problems.

**GST 202: Fundamentals of Peace Studies and Conflict Resolutions**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

**GST 203: Philosophy and Logic (2 C)**

Fundamentals of logic and critical thinking; types of discourse; nature of arguments; validity and soundness; techniques for evaluating



arguments; distinction between inductive and deductive inferences; etc. Illustrations from familiar texts, including literature materials, novels, law reports and newspaper publications

### **EDU 231: Curriculum Theory and Practice (2 C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation.

### **EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialization:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

### **EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages

In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questioning, Questions in Classroom: The teacher's questions, the pupil's questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-visual in teaching, Types of Audio-visual Aids and their uses.

**EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

**EDU 254: Integrated Science Methods (2 C)**

The meaning of Integrated Science, Historical development of Integrated Science, Philosophy and Objectives of Integrated Science,

Justification for Teaching Integrated Science, Nature of Science, Science education curriculum reforms in Nigeria, Psychological theories of learning and their implications for Science Teaching, Methods of Teaching Integrated Science, Resources for teaching Integrated Science, Preparation for teaching Integrated Science, Science laboratory design, safety and management, Evaluation of Science teaching and learning with reference to Integrated Science.

**PHY 211: Mechanics I (2 C)**

Particle kinematics and dynamics, Work, energy and power, Angular momentum and torque, Newtonian gravitation, many particle systems, rigid body dynamics.

**PHY 202: Modern Physics I (2 C)**

Atomic structure, Charge quantisation, Mass spectra, the plum pudding model, Rutherford model and Bohr models of the atom, Hydrogen spectra, Magnetic moment and Angular momentum of an atom, Electron spin, Pauli exclusion principle and electronic configuration, X-ray spectra, Wave-particle duality, Nuclear structure: nomenclature, binding energy and stability, Radioactivity, The radioactive series, Accelerators, Detectors.

**CHM 203: Organic Chemistry II (2 C)**

Factors affecting structure and physical properties of organic compounds; factors affecting availability of electrons, stereochemistry; energy of activation and free radical substitution reactions in alkenes. Functional group chemistry. Electrophillic and nucleophillic substitution reactions. Aromaticity. Various type of organic reactions; e.g. addition, free radical, elimination and substitution reactions.

**CHM 205: Inorganic Chemistry II (2 C)**

Chemistry of first row transition metals. Introduction to co-ordination Chemistry including elementary treatment of crystal field theory. Comparative Chemistry of the following elements: (a) Ga, In, Tl, (b) Ge, Sn, Pb, (c) As, Sb, Bi (d) Se, Te, Po. Elementary introduction to Organometallic Chemistry. Role of metals in biochemical Systems.

**BIO 201: Genetics 1 (2 C)**

Hereditary and non-hereditary characteristics of living organisms, chromosomes, genes, the chromosome theory of inheritance, the chromosome structure of the Eukaryotes and Prokaryotes. Mendel's laws. Genotype, phenotype, dominance, alleles, Linkage, crossing-over, sex-linkage, sex chromosomes and sex determination. Application of genetics in agriculture and medicine.

**BIO 202: Introduction to Ecology (2 C)**

General consideration of ecosystems including influence and interaction of human beings with their environments. Similarities, differences of ecosystems. Characteristics and ecological adaptations of various forms of life.

**BIO 203: General Physiology 1 (2 C)**

Physical and chemical processes in animals and plants; diffusion, osmotic pressure and osmolarity. Water potential, turgor, plasmolysis, Gibbs-Donan relationship. Gas exchange, partial pressures (Tension), Hydrogen-ion concentration (Ph). Henderson Hasselbach equation, buffers in physiology. Nutrition; photo-autotrophism, heterotrophism (essential requirements of each), Respiration and photosynthesis; RQ and QIO in relation to metabolism, photosynthesis, oxygen and carbon dioxide exchange.

**ESM211: Global Environmental Issues (2 C)**

System theory; the ecosystem concepts; the Gaia hypothesis; environment and society; sustainable development concepts; marine pollution; population and environment; world energy picture; biotechnology and genetic engineering (cloning); environmental green movements; transportation; tourism; sustainable urban development.

**BIO 205: Introductory Developmental Biology (3C)**

History and present trends in cell biology. Reproductive cell division, differentiation and growth of cells. Molecular basis of cell structure and development. Proteins and nucleic acids.

### **SED 305 Practicum in Science Teaching (3C)**

Students are expected to carry out activities in their respective areas of specialisation as stated below:

#### **Agric Practicum**

Activities in Farm tools & Machinery, Methods in Farm Surveying, Management of Farm Animals, Construction of Egg candler & candling, Soil and Soil experiments, Rocks & Rock Formation, Floriculture .

#### **Biology**

Activities on Microscopy cell division, Construction of queraat, Ecosystem, Improvisation of necessary instrument in Biology e.g. Rain gauge, ACC paper wind vane etc. Activities on genetical principles, Construction of Herbarium, Staffing of Animals, Skeleton.

#### **Physics**

Activities on Graphs & Data handling, Activity on measurement of Mass, Experiment on Mechanics, Experiments on light.

#### **Chemistry**

Activities on separation Techniques, Preparation of standard solutions, Activities on volumetric Analysis, Qualitative analysis, Test for gases activities on Identification of rations.

#### **Integrated Science**

Activities on Microscopy, Improvisation of an ecosystem, Activities on Energy transformation, Simple machines, Thermo dynamics, Test for gases, Separation techniques, Activities on Volumetric Analysis.

#### **Mathematics**

Improvisation of Abacus Counters

Using improvised materials to teach shapes such as triangle, circle square etc.

Using simple games to teach elementary mathematics.

## **Computer Science**

Activities on computer games, Improvising computer, Activities on computer virus.

**Note:** The activities for each of the sciences listed above will include post teaching practice discussion and remediation.

### **EDU 336: Post Teaching Practice Evaluation/Remediation (2c)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice
- The lesson notes used during the teaching practice
- Assessment questions as well as the marking guides used
- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the Study Centre Director for:

- Evaluation
- Feedback, and
- Remediation.

The result of the overall process should be communicated to the student from the Dean through the Study Centre Director.

### **EDU 321 Psychology of Learning (2 C)**

Definitions of psychology and learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and

punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – Skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application.

### **EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process, The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instruction, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

### **EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value.

### **EDU 314: Comparative Education (2 C)**

Scope and meaning of Education, Examination of Significant Differences and Similarities in Education Policy and Practices in Selected Societies, Problems of Educational Development in Developing Countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**EDU 336: Post Teaching Practice Evaluation/Remediation (2c)**

**PHY 308: Electronics I (3 C)**

Amplifiers: Classification of amplifiers, equivalent circuit of transistor, operating point and bias stability, small signal amplifier, r-f amplifiers; Oscillators: negative feedback, positive feedback, LC oscillators, RC oscillators; Power supply: power source, dc power unit, performance of rectifier, filter circuits, regulation of output voltage; Linear integrated circuits: the Op Amp and its applications, amplifiers and voltage regulators.

**BIO 304: General Ecology (2C)**

The ecosystem approach to the study of ecology. Types of interaction. Energy flow and nutrient cycling, population structure, population dynamics: birth and death rate, life tables and longevity. Communities in ecosystem. Influence of man.

**CHM 311: Petroleum Chemistry (2C)**

Petroleum in the contemporary energy scene: Nature, classification and composition of crude petroleum and natural gases. Distribution of petroleum and natural gas resources (the global and Nigerian situations). Petroleum technology, survey of refinery products and process. Petrochemicals as industrial raw materials. Prospects for the petrochemical industry in Nigeria.

**CHM 314 Environmental Chemistry (2 C)**

Concepts of elementary cycles. Characteristics of the atmosphere. Sources, types and effects of environmental pollution. Waste water treatment. Composition of domestic wastes. Water chemistry and analysis. Chemical and Physical instrumentation in environmental sciences.



**CHM 304: Colour Chemistry and Technology (2 C)**

Colour and constitution. Chemistry, properties of dyes and pigments. Classification of dyes and fibres. Dyeing mechanisms. Preparation and dyeing of natural and synthetic fibres.

**BIO 305: Molecular Biology (3C)**

Genetics studies of microorganism, metabolic pathways, genes and chromosomes, nucleic acids (RNA and DNA), replication, transcription, gene expression and sequencing, protein synthesis, genotype, genetic code.

**BIO 307: Evolution (2 C)**

Theories of evolution, Population genetics, gene frequency/equilibrium. Hardey Weinberg Principle, Polymorphism. Variation; types and causes, reshuffling of genes, Mutation; origin and types. Polyploidy, isolation mechanism, adaptation; origin of life; evolution of organic molecules, Polymer synthesis; isolation and replication, the first cell, origin of species. Evidence of evolution; fossils (carbon dating), comparative anatomy, Taxonomy, Comparative-biochemistry, physiology, immunology, cell biology. Evolution of the plants, role of oxygen, multi cellular development. Phylogeny, geological periods and epochs.

**BIO 408: Soil Ecology (2 Units)**

Classification and characterisation of soils. Chemical components and analysis of soils and plant tissue. Plant, soil and water relationships. Physical and chemical properties of soil. Detritus organisms. Cycling of mineral and nutrient pool.

**EDU 421: Guidance And Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counseling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counselling Service:- Nature, Purpose and Theories

of Counselling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counselling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student’s records and reports, Student’s discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral, cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of

test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**B.Sc. (Ed )Computer Science Education**

**Graduation Requirements**

To be eligible for the award of the B.Sc. (Ed) Computer Science, a student must have passed a minimum of 160 and 124 credit units for the four year and three year degree programme respectively. That is:

- For a four year degree course, a minimum of 165 units should be required for graduation,
- For a direct three year course, a minimum of 121 units should be required for graduation;
- At the commencement of the programme, each student are furnished with the information specifying the requirements for the award of the degree;
- Students must pass all core and GST courses.

## Programme Structure and Degree Rules

### 1 Outline of Course Structure

The B.Sc. (Ed.) Computer Science Education is structured to run for a minimum of four years and maximum of eight years for students starting at 100 levels or minimum of three years and maximum of six years for students at 200 level.

### 2 Degree Rules

To be eligible for the award of the B.Sc. (Ed.) in Computer, a student must have passed a minimum of 160 and 124 credit units for the four year and three year degree programme respectively.

**Table 12: B.Sc. (Ed ) Computer Science Education  
( a ) Summary of Distribution of Course Credits by Level**

Level	GST and other General Courses	Education		Subject/Specialisation Area		Total
		Compulsory	Elective	Compulsory	Elective	
100 Level	6	6	-	30		<b>42</b>
200 Level	6	10	-	26		<b>42</b>
300 Level	2	15	-	33		<b>40</b>
400 Level	-	18	-	18		<b>36</b>
	<b>14</b>	<b>49</b>	-	<b>97</b>		<b>160</b>

**(b) 100 Level First Semester**

<b>Course Code</b>	<b>Course Titles</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 101	Use of English and Communication Skills I	2	C
GST 107	The Good Study Guide	2	C
EDU 111	Foundations of Education	2	C
PHY 101	Elementary Mechanics, Heat and Properties Of Matter	3	C
PHY 191	Introductory Physics Practical	2	C
MTH 101	Elementary Mathematics I	3	C
MTH 103	Elementary Mathematics II	3	C
CIT 101	Computers in Society	2	C
BIO101	General Biology I	2	C
	<b>Total Credit Units</b>	<b>21</b>	

Course Code	Course Titles	Credit Unit (s)	Status
GST 102	Use of English and Communication Skills II	2	C
MTH 102	General Mathematics III	3	C
EDU 112	Professionalism in Teaching	2	C
EDU 114	History of Education	2	C
PHY 102	Elec., Magnetism and Modern Physics	2	C
PHY 103	Geometric and Wave Optics	2	C
PHY 192	Introductory Physics Practical II	2	C
CIT 102	Software Application Skills	2	C
CIT 132	Programming in Basic	2	C
STT102	Introductory Statistics	2	C
	<b>Total Credit Units</b>	<b>21</b>	

**(c) 100 Level Second Semester**

**(d) 200 Level First Semester**

Course Code	Course Titles	Credit Unit(s)	Status
GST201	Nigerian Peoples and Culture	2	C
GST203	Introduction to Philosophy and Logic	2	C
EDU231	Curriculum Theory and Practice	2	C
EDU233	General Teaching Methods Effect	2	C
MTH211	Abstract Algebra I	3	C
MTH213	Numerical Analysis I	3	C
MTH281	Mathematical Methods	3	C
CIT211	Introduction to Operating Systems	3	C
CIT213	Elementary Data Processing	2	C
	<b>Total Credit Units</b>	<b>22</b>	

- **Students must offer one elective course at any semester in 200L.**

**( e ) 200 Level Second Semester**

<b>Course Code</b>	<b>Course Titles</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 202	Fundamentals of Peace Studies and Conflict Resolution	2	C
CIT208	Information System	2	C
CIT246	Introduction to Computer Organisation	2	C
CIT 212	Systems Analysis and Design	3	C
CIT292	Computer Laboratory I	2	C
MTH282	Mathematical Methods II	3	C
EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
EDU 258	Computer Science Methods	2	C
	<b>Total Credit Units</b>	<b>20</b>	

- **Students must offer one elective course at any semester in 200L.**

**( f ) 300 Level First Semester**

<b>Course Code</b>	<b>Course Titles</b>	<b>Credit Unit</b>	<b>Status</b>
GST 301	Entrepreneurship Education	2	C
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research Methods in Education	2	C
EDU 335	Teaching Practice I	3	C
CIT341	Data Structure	3	C
CIT 311	Computer Networks	3	C

CIT 371	Introduction to Computer Graphics and Animation	3	C
<b>Total Credit Units</b>		<b>18</b>	

Take only one of the elective courses. Take 100L GST courses.

**( g ) Second Semester**

Course Code	Course Titles	Credit Unit (s)	Status
MTH307	Numerical Analysis II	3	C
EDU332	Educational Technology	2	C
EDU314	Comparative Education	2	C
SED 305	Practicum In Science Education (Computer Science Option)	2	C
EDU336	Teaching Practice Evaluation and Feedback	2	C
CIT 309	Computer Architecture	3	C
CIT 342	Formal Languages and Automata Theory	3	C
CIT 381	File Processing and Management	2	C
CIT 389	SIWES	3	C
<b>Total Credit Units</b>		<b>22</b>	

- Students must offer one elective course of two credit units.
- Take 100L GST Courses

**( h ) 400 Level**

**First Semester**

Course Code	Course Titles	Credit Unit (s)	Status
EDU435	Teaching Practice II	3	C
EDU421	Guidance and Counselling	2	C
EDU423	Measurement and Evaluation	2	C
CIT403	Seminar on Emerging Technologies	3	C
CIT445	Principles and Techniques of Compilers	3	C



CIT427	Database Systems and Management	2	C
EDU400	SIWES	3	C
	<b>Total Credit Units</b>	<b>18</b>	

**Take only one elective.**

**(i) Second Semester**

Course Code	Course Titles	Credit Unit (s)	Status
EDU412	Principles of Educational Management	2	C
EDU420	Research Project	4	C
EDU426	Special Education	2	C
CIT432	Software Engineering II	3	C
CIT412	Modelling and Simulations	3	C
CIT474	Introduction to Expert System	2	C
CIT484	Website Design and Programming	2	C
	<b>Total Credit Units</b>	<b>18</b>	

- Students must offer one elective course of 2/3credit units.
- Direct Entry students must have taken all 100L GST Courses.

**Course Content Specification**

**GST 101: Use Of English and Communication Skills I (2C)**

Listening enabling skills, Listening and Comprehending Comprehension, Note Taking and Information Retrieval. Including Data, figures, Diagrams and Charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and Comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

**GST 102: Use Of English and Communication Skills II (2C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including

definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

### **GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organized, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks and lectures, learning from T.V and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay, conclusion. How to write essays: Introduction, the craft of writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

### **GST 202: Fundamentals of Peace Studies and Conflict Resolutions (2)**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

**GST 203: Philosophy and Logic (2 C)**

Fundamentals of logic and critical thinking; types of discourse; nature of arguments; validity and soundness; techniques for evaluating arguments; distinction between inductive and deductive inferences; etc. Illustrations from familiar texts, including literature materials, novels, law reports and newspaper publications

**GST 301: Entrepreneurship Studies**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

**EDU 111: Introduction to Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

**EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent

Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession.

### **EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

### **EDU 231 Curriculum Theories and Practice (2 C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation.

### **EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialisation: Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society;

Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

**EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questing, Questions in Classroom: The teacher’s questions, the pupil’s questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-visual in teaching, Types of Audio-visual Aids and their uses.

**EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution

Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

## **Entrepreneurship Education**

### **EDU 258: Computer Science Methods (2C)**

### **EDU 321: Psychology of Learning (2 C)**

Definitions of psychology & learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application.

### **EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process; The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instruction, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

### **EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and

data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 314: Comparative Education (2 C)**

Scope and meaning of education, examination of significant differences and similarities in education policy and practices in selected societies, problems of educational development in developing countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**SED 305 Practicum in Science Education (Computer Science Option ) (3C)**

Activities on computer: Computer games, Improvising computer, Activities on computer virus.

**EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write (i.e. type) a comprehensive report on his/her experiences in TPI (EDU335), the practical implications of teaching/learning strategies in the classroom. The typed report should not exceed two pages and should be in double line spacing. It should include:

- \* The Comprehensive and general overview of the TP1 (EDU335) exercise,
- \* Challenges encountered during the teaching practice,
- \* Suggestions for teaching improvement in future TP2.

The student should send originals or photocopies of **all** the lesson notes used during the teaching practice. This should include assessment questions given to the pupils/students as well as marking guides used in marking the assessments. Comments made by the supervisor should be seen in the submission.

**(Note:** The student does not need to type out a new lesson note to be sent. He should send the complete lesson note used during TP1( EDU335). This should be forwarded with a typed report.)

The report should be submitted by the students to the Dean through the Study Centre Director for: i) evaluation, ii) feedback and iii) remediation. The result of the overall process should be communicated to the students from the Dean through the Centre Director.

#### **EDU 421: Fundamentals of Guidance and Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counselling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counseling Service:- Nature, Purpose and Theories of Counselling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counseling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:- Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.



**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Students organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioural, cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational

considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**MTH 133: Trigonometry (2 C)**

Trigonometric functions; Radian measure, law of sine and cosine, sum, differences and product formulas. Trigonometric identities, Inverse trigonometric functions, solutions of Trigonometric equations. Exponential and logarithmic functions, laws of exponents and a logarithm. Algebraic functions, polynomials, division algorithm, synthetic division, factor theorem, remainder theorem. Rational functions, asymptotes partial fractions.

**MTH 112: Differential Calculus (2 C)**

Real number: The number line, intervals, properties of absolute value. Solving inequalities sign chart. Function from  $\mathbb{R}$  to  $\mathbb{R}$ , domain range, graph, monotonically increasing, decreasing functions. Inverse functions. Composition of functions. Even and odd functions, periodic functions, Limits, Convergence Sequences. Limit of a Function, Left and Right limits and continuity. Differentiability at a Point and on an interval. Sum, Product and Quotient Rule. Chain rule for inverse function. Implicit differential.

**MTH 131: Elementary Set Theory (2 C)**

Definition of set, subset, union, intersection, complements, Venn diagram, null set, power sets, chain rule, tangent line to a space curve, tangent plane to a surface, maxima and minima, Taylor's formula. Symbolic logic and truth tables, Boolean algebra, open and close sentences; conjunction, disjunction, tautology and application of logics in circuit design.

**MTH 121: Linear Algebra I (2 C)**

Definition of a matrix and types of matrices; Equality of matrices; transpose of a matrix; Hermitian matrix; Skew Hermitian; matrix

Algebra: Properties of matrix addition; Scalar multiplication; matrix multiplication. Linear Equations; Linear Equation in two unknowns; General systems of linear equations. Determinants: Determinants of  $2 \times 2$  matrix; Determinants of  $3 \times 3$  matrix: properties of determinants; Inverse of matrices; Inverse of a square matrix; Inverse of a non-singular  $2 \times 2$  matrix; Inverse of a  $3 \times 3$  square matrices; Invertible matrices and Determinants; Row Echelon form and system of equations; solving systems of equation by row, Reduced Echelon form; Determinant and systems of equations; Transformation of the plane; some properties of transformation: Vector spaces; Definitions; Sub packs, ranks of a matrix; linear dependence; Basis of vector; Wronkian of functions.

### **MTH 122 Integral Calculus (2 C)**

Fundamental theorem of calculus. Integration by parts, change of variable method, integration of rational functions, trigonometric integral, trigonometric substitutions. Numerical integration: Trapezium method.

### **PHY 132: Electricity and Magnetism and Modern Physics (2C)**

Electrostatics – electric charges, forces between electric charges, static electricity, conductors and currents, dielectrics, heating effects of Current-secbeck and Peltic effects with practical applications. Magnetic fields – fields due to a flat Coil, Solenoid and infinitely long straight wire, forces between current-carrying conductors, Ammeters, electrolysis and ion velocities, voltmeters. Practical application of electrolysis, Magnetic induction, Maxwell's equation, electromagnetic oscillations, waves and applications.

### **PHY 142: Geometric and Wave Optics (2 C)**

Reflection and Refraction. Review of refractive index and Snell's law, real and apparent depth, Total Credit Units internal reflection, critical angle, methods of measuring refractive index. The air-cell method. The Prism, refraction through prism. Angle of deviation, minimum deviation, principle of reversibility of light ray, small angle prism. Lenses and their construction. Derivations of lens formula and lens. Makers formulae. Virtual objects, magnification. Thin leaves in

contact. Newton's formula. Spherical mirrors. The mirror formula, spherical and chromatic aberrations. Eye defects; calculation of powers and focal length of correcting lenses. Dispersion and Spectrometer. Dispersion and dispersive power. The spectrometer, essential parts and adjustments; measurements of refractive index. Spectroscopy, classification of spectra. Applications. Optical instruments. Basic principles, the simple magnifying glass. The compound microscope, the astronomical telescope, the eye ring. Wave Nature of light. Interference of light, optical path, conditions for interference, interference fringes. Young's experiments, Fresnel's biprism. Parallel sided thin films, the wedge fringes. Newton's rings. Applications of interference. Polarisation, Malus Law, Polaroids

**PHY 191: Introductory Practical Physics (2 C)**

Selected experiments on topics covered in PHY 111 and PHY 122, Application of a variety of simple experimental techniques with emphasis on quantitative measurements, experimental errors and graphical analysis.

**PHY 192: Introductory Practical Physics II (2 C)**

Selected experiments on topics covered in PHY 131 and PHY 102 with emphasis on application of a variety of simple experimental technique, quantitative measurements, experimental errors and graphical analysis.

**MTH 211: Introductory Set Theory and Abstract Algebra (2 C)**

Set: Binary operations, mapping, equivalence relations integers: Fundamental theorem of arithmetic, congruence equations, Euler's function (n) Group Theory: Definition and examples of groups. Subgroups, Coset decomposition, Lagrange's theorem. Cyclic groups. Homomorphisms, Isomorphism. Odd and even permutations, Cayley's Theorem. Rings: Definition and examples of rings. Commutative rings. Integral domain. Order, well-ordering principles. Mathematical induction.

**MTH 213: Numerical Analysis I (2 C)**

Interpolation: Lagrange's and Hermite interpolation formulae, divided differences and difference schemes. Interpolation formulas by use of divided differences. Approximation: Least-square polynomial approximation, Chebychev polynomials continued fraction and rational fraction orthogonal polynomials. Numerical Integration: Newton's-cotes formulae, Gaussian Quadrature. Solution of Equations: Graeffe's method. Bernoulli's method, Newton's method, Bairstow's method (iterative method) Matrices and Related Topics: Definitions, Eigenvalue and Eigenvectors, Algebraic Eigenvalue problems-power method, Jacobi method. Systems of linear Equations: Gauss elimination, Gauss-Jordan method. Jacobi iterative method, Gauss-field iterative method.

**MTH 307: Numerical Analysis II (2 C)**

Polynomial and Splines chebyshev approximations: Orthogonal polynomials and approximations, least squares, cubes spline, Hermite approximations, Numerical Integration. Boundary value problem. Introduction to numerical solution of partial differential equations.

**CIT 101: Computers in Society (2 C)**

Overview of the discipline of Computer Science General structure of a computer system; Historical development of computer systems; Generations of computer system; Computer operations; Internal structure of a computer hardware; Microcomputer technology; Computer numbering system; computer arithmetic; computer data representation schemes; Problem solving with computers Elements of programming languages. Computers in the Society internet and its facilities. Basic file processing concepts. Introduction to computer programming using VISUAL BASIC programming language; Algorithms, Data Structures and Logic; Laboratory exercises in VISUAL BASIC programming and the internet.

**CIT 132: Programming in BASIC (2C)**

**CIT 211: Introduction to Operating System (3C)**

Definition of an Operating System; Types of Operating Systems; DOS, CP/M, UNIX/ZENIX, LINUX, MS Windows 95/98/2000, etc. Components of an Operating System; Process Management; Supervisor, Memory Manager, I/O handlers, File System, etc. Operating System Interface with the Hardware; Interrupts, Deadlocks, I/O Channel, Multiplexer, Registers, Status words; Memory Management; Virtual Memory. Operating System Interface with other Systems Software; Linkers, Translators, Libraries, etc. Storage Organisation and Protection.

**CIT 212: Systems Analysis and Design (2 C)**

General systems concepts: Systems project team organisation; Overview of systems development process; Project identification and selection; system requirements analysis and feasibility study; fact finding techniques; Systems design; Analysis techniques and tools e.g. Jackson System Development (JSD) techniques etc. Data flow diagrams (DFD), HIPO charts. Business system design; procurement, site preparation, system installation, system testing, system conversions; system project, report writing, and presentation; system documentation; post installation evaluation; compilation of a real-life system analysis team project to provide experience in applying the principles and techniques presented above

**CIT 215: Introduction to Programming Languages (2C)**

FORTRAN programming language; Comparison of various versions of the language. Programming exercises using FORTRAN with emphasis on scientific application problems. Elements of Pascal language. Exercises in Pascal Program structures and programming concepts; Structured design principles; abstraction, modularity, stepwise refinement, structured design techniques teaching of a structured programming language, e.g. PASCA/JAVA, C<sup>++</sup>.

**CIT 237: Programming and Algorithms (3C)**

The Programming Development Process, Programme design, Coding, and Testing Principles of Good Programming Styles; Programme

Verification Techniques; Programme Documentations and Maintenance; Programme Design Tools, e.g. Flowcharts, Pseudocodes, etc. Illustration of the various Concepts with Practical Programming Problems of Manageable Complexity e.g Knight's Tour or 8-queens, Life Game Problems. etc. Algorithms and Data Structures; Divide-and Conquer Algorithms; Stacks, Queues, Trees. A Treatment of Popular Sorting and Searching Algorithms; Performance analysis of Algorithms. Worst-, best-and average-case performance of the algorithms. Recursion, Hill-climbing Techniques.

**CIT 208: Information System (3C)**

Introduction & Basic SQL Project Introduction; Advanced SQL; Conceptual Modeling & Schema Design; Database Programming, JDBC, Regular Expressions. Functional Dependencies; E2; Functional Dependency & Relational Algebra; Relational Algebra; Introduction to XML, XML & XQuery; Web services; Transactions; Recovery; Database Heterogeneity.

**CIT 246: Computer Organisation (2C)**

Number Systems; Number Representation; Computer Arithmetic; Basic Instruction Cycle; Data types; Instruction types; Addressing modes; Assemblers, Linkers, Loader; Subroutines, Stacks; I/O, Traps, Interrupts; Floating-point Instructions; Instruction Set Design; Virtual Machines, Compilation/Interpretation.

**CIT 264: Software Application Skills (2 C)**

Brief description of computer system: CPU, I/O devices; Operating systems; Computer File Management; Computer Software: overview, types, etc.; Application software: common application software; Using Microsoft Word; Using Microsoft Excel; Features of Database Applications and Microsoft Access; Statistical Analysis Applications; Using SPSS software; Introduction to Desktop Publishing applications; Computer applications in Nursing; Computer applications in Agriculture; Managing the computer system with the Control Panel.

**CIT 292: Computer Laboratory (2C)**

Laboratory Exercise using the Programming Language

Laboratory Exercise using a Microcomputer Operating System, e.g. MS-97/98/2000 Laboratory Exercise using Relevant Programming Languages such as C and C<sup>++</sup>; Submission of a Group Report of Case Study of a Computer Centre. Laboratory Exercise in COBOL, ADA, and SQL.

**CIT 311: Computer Networks (3 C)**

Basic models of communication; data communication and networks; protocols and their basic architecture; idea for standardisation; transfer of data; tools and mediums for transfer; data coding; data communication interfaces; control of data connections; multiplexing; local area networks; technology, architecture and systems; wide area networks; types of communication; integrated digital services; internetworking communication; network level; basics of OSI and Internet architecture and reference models; Internet protocols; traffic control; Types of network protocols; transport protocols; application level; system aspects network security; distributed applications; basic network services; network management; OSI and Internet models for management; definition of system servers: from addresses and names to services.

**CIT 333: Software Engineering I (3 C)**

Top-DOWN design, modularity, technical and managerial problem of software development design representations; e.g. pseudo code HIPO diagrams CASE tools and Programming Environments.

**CIT 309: Computer Architecture (3 C)**

Introduction, basic computer organisation; Instruction formats, instruction sets and their design; ALU design: Adders, subtracters, logic operations; Boolean Algebra; Karnaugh Maps; Datapath design; Control design: Hardwired control, micro-programmed control; More on arithmetic: Multiplication, division, floating point arithmetic; RISC machines; Pipelining; Memory systems and error detection and error correction coding; Caches; Memory; I/O and Storage; Multiple Issue; Dynamic Scheduling; Data-Level Parallelism and Vectors; Shared-Memory; Multiprocessors; Multithreading.



**CIT 342: Formal Languages and Automata Theory (3 C)**

Introduction to language structures; languages and their representations; Grammars; formal notations, types, Chomsky's language hierarchy; sentence generation and recognition; derivations; Ambiguity and syntax and finite state automata; context-free grammars; simplification of context-free grammars; Chomsky, Greibach Normal Forms Push-Down automata, LR(K), grammars, Recursive languages; semantics. Lab. exercises.

**CIT 341: Data Structure (3C)**

Basic Data Structure including Lists and Trees, Constructs for Specifying and Manipulating Data types; List Structures; Binary, AVL and other Trees, Traversal Algorithm, Graphs, Rings, Recursive Programming; Storage Management; Stacks; Queues, Language Features affecting Static & Dynamic Data Structures, Fixed and Variable Sized Blocks; Best-fit; First-fit; etc. Garbage Collection; Fragmentation; Buddy System; Block Compaction and Relocation Hash Tables, Programming Exercises involving the Implementation and use of Data Structures.

**CIT 445: Principles and Techniques of Compilers (3C)**

Recapitulation of formal grammars; source code and target code structure of typical compiler, comparative compiling techniques. Lexical analysis syntax analysis; simple precedence, operator precedence, LR (K) parsers; semantics, Runt time storage allocation code generation and code optimisation. Compiler-compilers. Pragmatics of Compiler writing: Translator writing Error recovery and Optimisation problems; Laboratory exercises leading to the productions of major parts of a compiler for an actual programming language.

**CIT 371: Introduction to Computer Graphics and Animations (3C)**

Mathematics of 3-Ds and Projections; Graphical Data Structures; Characteristics and types of Display Memories; Graphics hardware including Digital Plotters and Display Devices; Graphics software.

### **CIT 463: Multimedia Technology (3 C)**

Introduction: What is multimedia, Multimedia systems, Quality of service, Synchronization & orchestration, Standards, Convergence, Value chain. Hardware: Multimedia computers, Video and graphics, Audio, Telephone, video conference, and networks, CD and DVD, USB and FireWire, Processors, Video for Windows, DirectX, and ActiveMovie. Software: Browser based software architecture, Distributed software, Servers, Network, Terminals. Audio and Video: Digital audio; Psycho acoustics, Digital presentation of sound, Digital images, JPEG, Video signal, Camera sensors, Colours, Colour television, Equipment, Compression systems, Basics of video compression, Methods, Algorithms. Interchange Formats: Application areas, Requirements, Track and object model, Real-time transfer, Different transfer formats, Comparison. Authoring Tools: Production process, Tools, Barriers, Development areas. Communications: QoS, ATM, QoS implementations, Integrated Services, Differentiated Services. Multicast: Group control, Routing, Real-time transfer and control protocols, Resource reservation, Session control, MBone. Video Conference: Standards, Products, Internet telephony, CTI (Computer Telephony Integration). Access Networks: Cable television, Digital subscriber lines, UMTS, Digital television.

### **CIT 427: Database Systems and Management (2 C)**

Basic concept of data bases, history of DBMS types of database, specific problems of data independence, data reliability, integrity, etc, data, data management, database generation, raw data, data definitions, data structure, storage structure database logical and physical organisation, interrogation, data model, network, hierarchical, relational, security, policies, privacy quality and integrity protection mechanism. Introduction & Basic SQL Project Introduction. Advanced SQL. Conceptual Modeling and Schema Design. Database Programming, JDBC, Regular Expressions. Functional Dependencies E2: Functional Dependency & Relational Algebra. Introduction to XML. XML and XQuery. Web Services. Transactions. Recovery. Database Heterogeneity.

### **CIT 425: Operations Research and Computer Simulations (3C)**

Simple theories of queues, stochastic processes and random numbers, definition and uses of simulation; discrete simulation models, design of simulation experiments; simulation langs, detailed study of a chosen simulation language; applications; Lab. exercises. The nature of operation research; allocation problems; inventory problems; Replacement; maintenance and reliability problems. Dynamic programming; sequencing and co-ordination.

### **CIT 432: Software Engineering II (3 C)**

Programme Testing; software Reliability models Availability models. Management Techniques. Formal Methods, e.g. VDM, OBJ.

## **B.Sc. (Ed) Mathematics Education**

### **Graduation Requirements**

To be eligible for the award of the B.Sc. (Ed.) in Mathematics Education, a student must have passed a minimum of 154 and 126 credit units for the four year and three year degree programmes respectively. That is:

- For a four year degree course, a minimum of 154 units should be required for graduation.
- For a direct three year course, a minimum of 126 units should be required for graduation.
- At the commencement of the programme, each student is furnished with the information specifying the requirements for the award of the degree.
- Students must pass all core and GST courses.
- All Education courses are core courses.

### **Programme Structure and Degree Rules**

#### **1 Outline of Course Structure**

The B.Sc. (Ed.) Mathematics Education is structured to run for a minimum of four years and maximum of eight years for students

starting at 100 level or minimum of three years and maximum of six years for students at 200 level.

The courses listed in the tables are designed to provide students with an in-depth knowledge of mathematics and allow students to broaden their knowledge in other related disciplines.

## 2 Degree Rule

To be eligible for the award of the B. Sc (Ed.) in Mathematics Education, a student must have passed a minimum of 154 and 126 credit units for the four year- and three year- degree programme respectively. However, students must offer and pass all the compulsory courses. No student should register for more than 24 units in any semester.

**Table 13: B.Sc. (Ed) Mathematics Education**  
**( a ) Summary of Distribution of Compulsory Course Credits by Level**

Level	GST and other General Courses	Education		Subject/Specialisation Area		Total
		Compulsory	Elective	Compulsory	Elective	
100	6	8		18		30
200	6	12		30		48
300	2	18		21		41
400	-	17		18		35
<b>Total</b>	<b>14</b>	<b>53</b>		<b>87</b>		<b>154</b>

### ( b ) 100 Level First Semester

S/N	Course Code	Course Title	Level	Semester	Unit(s)	Status

1	GST101	Use of English and Communication Skills I	100	1	2	C
2	GST107	The Good Study Guide	100	1	2	C
3	EDU111	Foundations of Education	100	1	2	C
4	MTH101	Elementary Mathematics I	100	1	3	C
5	MTH103	Elementary Mathematics II	100	1	3	C
6	PHY101	Elementary Mechanics & Properties of Matter	100	1	3	C
7	CIT101	Computer in Society	100	1	2	C
		<b>Total</b>			<b>17</b>	

**( c ) 100 Level Second Semester**

S/N	Course Code	Course Title	Level	Semester	Unit(s)	Status
1	GST102	Use of English and Communication Skills II	100	2	2	C
2	EDU112	Professionalism in Teaching	100	2	2	C
3	EDU114	History of Education in Nigeria	100	2	2	C
4	CIT102	Software Application Skills	100	2	2	C
5	MTH102	General Mathematics	100	2	3	C

		III				
6	STT102	Introductory Statistics	100	2	2	C
		<b>Total</b>			<b>13</b>	

**( d ) 200 Level First Semester**

S/ N	Course Code	Course Title	Level	Semester	Unit(s)	Status
1	GST201	Nigerian Peoples and Culture	200	1	2	C
2	GST 203	Introduction to Philosophy and Logic	200	2	2	C
3	EDU 231	Curriculum Theory and Practice	200	1	2	C
5	MTH241	Introduction to Real Analysis	200	1	3	C
	MTH211	Abstract Algebra I	200	1	3	C
6	MTH281	Mathematical Methods 1	200	1	3	C
7	MTH213	Numerical Analysis	200	1	3	C
8	STT211	Probability Distribution I	200	1	3	C
9	CIT 215	Introduction to Programming Languages	200	1	3	C
		<b>Total</b>			<b>24</b>	

**( e ) 200 Level                  Second Semester**

<b>S/N</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Level</b>	<b>Semester</b>	<b>Unit(s)</b>	<b>Status</b>
1	GST 202	Fundamentals of Peace studies & conflict resolutions	200	2	2	C
2	EDU 212	Sociology of Education	200	2	2	C
3	EDU214	Philosophy of Education	200	2	2	C
4	EDU216	Special Method II Micro Teaching Method	200	2	2	C
5	EDU 233	General Teaching Methods	200	1	2	C
6	EDU240	Mathematics Methods	200	2	2	C
7	MTH212	Linear Algebra	200	2	3	C
8	MTH 232	Elementary Differential Equation 1	200	2	3	C
9	MTH210	Introduction to Complex Analysis	200	2	3	C
10	MTH 282	Mathematical Methods 11	200	2	3	C
		<b>Total</b>			24	

**( f ) 300 Level First Semester**

S/ N	Course Code	Course Title	Level	Semester	Unit(s)	Status
1	GST301	Entrepreneurship Education	300	1	2	C
2	EDU335	Teaching Practice I	300	1	3	C
3	EDU321	Psychology of Learning	300	1	2	C
4	EDU323	Research Methods and Statistics in Education	300	1	3	C
5	MTH301	Functional Analysis I	300	1	3	C
6	MTH341	Real Analysis	300	1	3	C
7	MTH304	Complex Analysis I	300	1	3	C
8	MTH381	Mathematical Methods III	300	1	3	C
		<b>Total</b>			<b>22</b>	

**Note:** Direct Entry students must take 100L GST Courses. Total number of units must not exceed 24 in a semester. The remaining 100LGST courses should be taken in future semesters of the programme.

**( g ) 300 Level Second Semester**

S/ N	Course Code	Course Title	Level	Semester	Unit(s)	Status
1	EDU302	ICT In Education	300	2	2	C
2	EDU332	Educational Technology	300	2	2	C



3	EDU314	Comparative education	300	2	2	C
4	*EDU336	Teaching Practice Evaluation and Feedback	300	2	2	C
5	SED305	Practicum in Science Teaching (Mathematics Option)	300	2	2	C
5	MTH308	Introduction to Mathematical Modeling	300	2	3	C
6	MTH305	Complex Analysis II	300	2	3	C
7	MTH312	Abstract Algebra II	300	2	3	C
		<b>Total</b>			<b>19</b>	

**Note:** The student must have taken EDU335 in a previous semester before taking EDU336

**Waiver:** Students who have passed any four compulsory mathematics courses (MTH) should be allowed to graduate.

**( h ) 400 Level First Semester**

S/N	Course Code	Course Title	Level	Semester	Unit(s)	Status
1	EDU421	Guidance and Counselling	400	1	2	C
2	EDU423	Measurement and Evaluation	400	1	2	C
3	EDU435	Teaching Practice II	400	1	3	C
4	SED413	Science,	400	1	2	C

		Technology and Society				
6	MTH401	General Topology I	400	1	3	C
7	MTH411	Measure Theory and Integration	400	1	3	C
8	MTH421	Ordinary Differential Equation	400	1	3	C
		<b>Total</b>			<b>18</b>	

**( i )400 Level Second Semester**

S/ N	Course Code	Course Title	Level	Semester	Unit(s)	Status
1	EDU420	Research Project	400	2	4	C
2	EDU412	Educational Administration	400	2	2	C
3	EDU426	Special Education	400	2	2	C
4	MTH412	Functional Analysis II	400	2	3	C
5	MTH402	General Topology II	400	2	3	C
6	MTH422	Partial Differential Equation	400	2	3	C
		<b>Total</b>			<b>17</b>	

**Note:** Direct Entry students must have completed their 100L GST courses by 400L.

## Course Content Specification

### **GST 101: Use of English and Communication Skills I (2C)**

Listening enabling skills, listening and comprehending comprehension, note taking and information retrieval. Including data, figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and Scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

### **GST 102: Use of English and Communication Skills II (2C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

### **GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature and his origin, man, environment and resources, Great Nigerian Scientists.

### **GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organized, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks and lectures, learning from T.V

and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay, conclusion. How to write essays: Introduction, the craft of writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

### **CIT 101: Computers in Society (2 C)**

Overview of the discipline of Computer Science, General structure of a computer system; Historical development of computer systems; Generations of computer system; Computer operations; Internal structure of a computer hardware; Microcomputer technology; Computer numbering system; computer arithmetic; computer data representation schemes; Problem solving with computers, Elements of programming languages. Computers in the Society, internet and its facilities. Basic file processing concepts. Introduction to computer programming using VISUAL BASIC programming language; Algorithms, Data Structures and Logic; Laboratory exercises in VISUAL BASIC programming and the internet.

### **EDU 111: Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

### **EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the

making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession.

### **EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

### **(Algebra and Trigonometry)**

Elementary set theory, subsets, union, intersection, complements, Venn diagrams. Real numbers; integers, rational and irrational numbers, mathematical induction, real sequences and series, theory of quadratic equations, binomial theorem. Complex numbers; algebra of complex numbers; the Argand Diagram. De Moivre's theorem,  $n$ th roots of unity. Circular measure, trigonometric functions of angles of any magnitude, addition and factor formulae.

### **MTH 102: Elementary Mathematics III: (3 Units) Pre-Requisite – MTH 101**

### **(Vectors, Geometry and Dynamics)**

Geometric representation of vectors in 1-3 dimensions, components, direction cosines. Addition and Scalar multiplication of vectors and linear independence. The Scalar and vector products of two vectors. Differentiation and integration of vectors with respect to a scalar variable. Two-dimensional co-ordinate geometry. Straight lines, circles, parabola, ellipse, hyperbola. Tangents, normals. Impact of two smooth sphere, and of a sphere on a smooth sphere.

**MTH 103: Elementary Mathematics III: (3 Units) Calculus**

Function of a real variable, graphs, limits and idea of continuity. The derivative as limit of rate of change, Techniques of differentiation, Extreme curve sketching. Integration as an inverse of differentiation, Methods of integration, Definite integrals; Application to areas and volumes

**MTH 131: Elementary Set Theory (2 C)**

Definition of set, subset, union, intersection, complements, Venn diagram, null set, power sets, chain rule, tangent line to a space curve, tangent plane to a surface, maxima and minima, Taylor's formula. Symbolic logic and truth tables, Boolean algebra, open and close sentences; conjunction, disjunction, tautology and application of logics in circuit design.

**MTH 121 Linear Algebra I (2 C)**

Definition of a matrix and types of matrices; Equality of matrices; transpose of a matrix; Hermitian matrix; Skew Hermitian; matrix Algebra: Properties of matrix addition; Scalar multiplication; matrix multiplication. Linear equations; linear equation in two unknowns; General systems of linear equations. Determinants: Determinants of  $2 \times 2$  matrix; Determinants of  $3 \times 3$  matrix: properties of determinants; Inverse of matrices; Inverse of a square matrix; Inverse of a non-singular  $2 \times 2$  matrix; Inverse of a  $3 \times 3$  square matrices; Invertible matrices and Determinants; Row Echelon form and system of equations; solving systems of equation by row, Reduced Echelon form; Determinant and systems of equations; Transformation of the plane; some properties of transformation: Vector spaces; Definitions; subspaces, ranks of a matrix; linear dependence; Basis of vector; Wronkian of functions.

**PHY 124: Geometrical and Wave Optics (2 C)**

Geometrical Optics: law of reflection and refraction; Location of images: Plane and curved mirrors; Converging and diverging thin lenses; Thick lenses; Lens defects; Aberrations; The eye; Optical instruments. Simple Harmonic motion; Wave motion and wave types; Dispersion; Production of sound in strings and pipes resonance, applications; Simple description of diffraction and interference,

applications to both light and sound waves; Polarisation of transverse waves.

**PHY 111: Elementary Mechanics (2C)**

Physical quantities, unit and dimensions space and time, frames of reference, vectors and scalars, kinematics – straight line, line motion, vertical motion, circular motion, deviation. Dynamics – Equilibrium, work and energy, mass and momentum, laws of inertia, rotational motion, simple harmonic motion, conservation laws, simple machines, fundamental laws of statics and dynamics, Galilean invariance.

**CIT 102: Software Application Skills (2C)**

Brief description of computer system: CPU, I/O devices; Operating systems; Computer File Management; Computer Software: overview, types, etc.; Application software: common application software; Using Microsoft Word; Using Microsoft Excel; Features of Database Applications and Microsoft Access; Statistical Analysis Applications; Using SPSS software; Introduction to Desktop Publishing applications; Computer applications in Nursing; Computer applications in Agriculture; Managing the computer system with the Control Panel.

**MTH 122: Integral Calculus (2 C)**

Fundamental theorem of calculus. Integral by parts, change of variable method, integration of rational functions, trigonometric integral, trigonometric substitutions. Numerical integration: Trapezium method.

**MTH 142 Vectors and Geometry (2 C)**

Equations of lines and planes. Conic sections, circles parabola, hyperbola, ellipse. Vectors in  $\mathbb{R}^2$ ,  $\mathbb{R}^3$ , Scalar products. Vector product Triple products. Application to Geometry.

**GST 201: Nigerian Peoples and Culture (2 C)**

Nigerian history, culture and arts in pre-colonial times; Nigerians' perception of their world; culture areas of Nigeria and their characteristics; evolution of Nigeria as a political unit;

indigene/settler phenomenon; concepts of trade; economic self-reliance; social justice; individual and national development; norms and values; negative attitudes and conducts (cultism and related vices); re-orientation of moral and national values; moral obligations of citizens; environmental problems.

### **GST 202: Fundamentals of Peace Studies and Conflict Resolution (2)**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

### **GST 203: Philosophy and Logic (2 C)**

Fundamentals of logic and critical thinking; types of discourse; nature of arguments; validity and soundness; techniques for evaluating arguments; distinction between inductive and deductive inferences; etc. Illustrations from familiar texts, including literature materials, novels, law reports and newspaper publications

### **EDU 231: Curriculum Theory and Practice (2 C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation



of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation

**EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialisation:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

**EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questioning, Questions in Classroom: The teacher's questions, the pupil's questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making,

Organisation of work, Revision and review of work, Physical environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-visual in teaching, Types of Audio-visual Aids and their uses.

**EDU 214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

**EDU 240: Mathematics Methods (2 C)**

Brief History of Mathematics; Importance of Mathematics in relation to other Subjects; some Mathematicians and their contributions. Curriculum Development in Mathematics; Selecting Mathematical goals and objectives, Mathematical Syllabus, Scheme of Work, Unit Plans, Lesson plans, and Characteristics of a lesson plan. Individual differences in Mathematical learning, Motivating Student to learn Mathematics, some Selected Method of Teaching, Introducing Concept in mathematics; Learning Aids in Mathematics; their Objectives and characteristics, Production of learning aids, Mathematics Laboratory as an approach of teaching

**CIT 215: Introduction to Programming Languages (2C)**

FORTTRAN programming language; Comparison of various versions of the language. Programming exercises using FORTRAN with emphasis on scientific application problems. Elements of Pascal language. Exercises in Pascal Program structures and programming concepts; Structured design principles; abstraction, modularity,

stepwise refinement, structured design techniques teaching of a structured programming language, e.g. PASCAL/JAVA, C++.

**MTH 211: Abstract Algebra I (3C)**

Set: Binary operations, mapping, equivalence relations integers: Fundamental theorem of arithmetic, congruence equations, Euler's function (n) Group Theory: Definition and examples of groups. Subgroups, coset decomposition, Lagrange's theorem. Cyclic groups. Homomorphisms, isomorphism. Odd and even permutations. Cayley's theorem. Rings: Definition and examples of rings. Commutative rings. Integral domain. Order, well-ordering principles. Mathematical induction.

**MTH 281: Mathematical Method I (3 C)**

Sequences and Series: Limits, continuity, Differentiability, implicit functions, sequences. Series, test for convergence sequences and series of functions. Calculus: partial differentiation, total derivatives, implicitly functions, change of variables. Taylor's theorem and maxima and minima functions, of two variables. Lagrangian multiplier. Numerical Methods: Introduction to iterative methods, Newton's method applied to finding roots. Trapezium and Simpsons rules of integration.

**MTH 213 Numerical Algebra I (3 C)**

Interpolation: Lagrange's and Hermite interpolation formulae, divided differences and difference schemes. Interpolation formulas by use of divided differences. Approximation: Least-square polynomial approximation, Chebychev polynomials continued fraction and rational fraction orthogonal polynomials.

Numerical Integration: Newton's-cotes formulae, Gaussian Quadrature. Solution of Equations: Graffe's method (iterative method) Matrices and Related Topics: Definitions, Eigenvalue and Eigenvectors, Algebraic Eigenvalue problems-power method, Jacobi method. Systems of linear Equations: Gauss elimination, Gauss-Jordan method. Jacobi iterative method, Gauss-field iterative method.

**MTH 232 Elementary Differential Equation (3 C)**

Introduction, equation of first order and first degree, separable equations, homogeneous equations, exact equations, linear equations, Bernoulli's and Riccati equations. Applications to mechanics and electricity. Orthogonal and oblique trajectories. Second order equations with constant coefficients.

**MTH 212: Linear Algebra II (3 C)**

Vector spaces. Linear independence. Basis, change of basis and dimension. Linear equations and matrices. Linear maps. The diagonal, permutation, triangular matrices. Elementary matrix. The inverse of a matrix. Rank and nullity. Determinants. Adjoint, cofactors, inverse matrix. Determinant rank. Cramer's rule. Canonical forms, similar matrices, Eigen values and vectors, quadratic forms.

**MTH 251: Mechanics I (3C)**

Static: System of live vectors. Cables and wrenches. Principles of virtual work. Stability of equilibrium. Dynamics of systems of particles: Elastic strings. Hooke's law. Motion in resisting media. Changing mass. Motion along a curve. Frenet's formulae. Coplanar Motion: Energy equation. Motion in a vertical circle. Simple pendulum. The cycloid and cycloidal motion. Orbital motion-disturbed orbits and stability.

**MTH 210: Introduction to Complex Analysis (3 C)**

Complex number, the topology of complex plane. Limits and continuity of function of complex variables, properties and example of analytic functions, branch-points, Cauchy-Riemann equations. Harmonic function.

**STT 211: Probability Distribution I (3C)**

Discrete sample spaces: Algebra and probability of events, combinatorial analysis. Sampling with and without replacement. Conditional probability, Bayes theorem and stochastic independence. Discrete distributions: Binomial, Poisson, negative binomial-hypergeometric and multinomial. Normal approximation to binomial and Poisson, Poisson approximation to binomial. Random variables and

expectations: mean, variance, covariance. Probability generating function and moment generating function. Cheycher's inequality. Continuous joint distributions: marjind as conditional density. Expectations: movement, movement generating functions. Uniform normal, beta Cauchy and hop-normal distributions.

### **CIT 208: Information Systems**

Introduction & Basic SQL Project Introduction. Advanced SQL. Conceptual Modelling and Schema Design. Database Programming, JDBC, Regular Expressions. Functional Dependencies E2: Functional Dependency & Relational Algebra. Relational Algebra. Introduction to XML.XML and XQuery. Web Services. Transactions. Recovery. Database Heterogeneity.

### **GST 301: Entrepreneurship Studies (2)**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

### **EDU 321: Psychology of Learning (2 C)**

Definitions of psychology and learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – Skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application.

**EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process; The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instruction, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 314: Comparative Education (2 C)**

Scope and meaning of education, examination of significant differences and similarities in education policy and practices in selected societies, problems of educational development in developing countries.

**EDU 335 Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom, and the functions of a good teacher.

**SED 305: Practicum in Science Teaching (Mathematics Option) (2C)**

Constructions of plane shapes- lines, triangles, quadrilaterals, locus

Construction of circle, inscribed and described circles

The pi: deriving the value of constant pi by measurement, calculation and by graph.

Nets of 3'D shapes

Teachers and students constructing various types of 3'D shapes (using both cardboards and solid materials like plywood), the globe;

Construction of Abacus, Geoboard, probability box.

Use of games to teach mathematics. Individuals to construct their own game or materials to teach some identified concepts in mathematics.

Computer typesetting of mathematics materials involving various mathematical symbols, subscripts, use of letters outside the English alphabet.

Using the computer to draw plane shapes and solid shapes according to specifications desired, Plotting of graphs using the computer.

### **EDU 336: Post Teaching Practice Evaluation and Feedback (2)**

The student is required to write (i.e. type) a comprehensive report on his/her experiences in TPI (EDU335) the practical implications of teaching/learning strategies in the classroom. The typed report which should not be more than 2 pages 11/2 line spacing, should include:

- \* The Comprehensive and general report of the TP1 (EDU335) exercise,
- \* Challenges encountered during the teaching practice,
- \* Suggestions for improvement on future teaching experience i.e TP2.

Send originals or photocopies of **all** the lesson notes used during the teaching practice. This should include assessment questions given to the pupils/students as well as marking guides used in marking the assessments. Comments made by the supervisors should be seen in the submissions.

**\*Note:** The student does not need to type out a new lesson note to be sent. He should send actual lesson notes used during TP1 i.e. EDU335. This should be forwarded with a typed report.

The report should be submitted by the student to the Dean through the Study Centre Director for: i) evaluation, ii) feedback and iii) remediation. The result of the overall process should be communicated to the student from the Dean through the Centre Director.

**MTH 304: Complex Analysis 1 (3 C)**

Functions of a complex variable. Limits and continuity of functions of a complex variables. Deriving the Cauchy-Riemann equations. Analytic functions. Bilinear transformations, conformal mapping. Contour Integrals, Cauchy's theorems and its main consequences. Convergence of sequences and series of functions of a complex variables. Power Series, Taylor Series.

**MTH 301: Functional Analysis I (3 C)**

Metric Spaces – Definitions and examples. Open Sphere of (balls) closed sets, interior, exterior, frontier, limit points and closure of a set. Dense subsets and separable space. Convergence in metric space, homeomorphism, continuity and compactness.

**MTH 302: Elementary Differential Equation II (3 C)**

Series, solution of second order linear equations. Bessel, legendry and hypergeometric equations and functions. Gamma and Beta functions. Storm Lionville problems. Orthogonal polynomial and functions, Fourier, Fourier, Bessel and Fourier – legendry series. Expansion in series of orthogonal functions. Fourier transformation. Laplace transforms, solution of wave and heat equations by Fourier method.

**MTH 312 Abstract Algebra II (3 C)**

Normal subgroups and quotient groups. The isomorphism theorem. Symmetric groups, automorphism, conjugate classes, Normalisers. The sylow theorems. Normal and composition series. The Jordan-Holder theorem. Direct product. Solvable group. Isomorphism theorems for rings. Ideals and quotient rings. Commutative ring, maximal ideals. Euclidean rings, principal ideal domain and unique factorisation domain.



**EDU 421: Guidance And Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counseling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counselling Service:- Nature, Purpose and Theories of Counselling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counselling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**MTH 401: General Topology I (3 C)**

Point Set Topology: The space  $\mathbf{R}^n$  Euclidean metric. Metrics, open spheres, metric topologies, metric spaces, properties of metric topologies. Equivalent metric. Heine-Borel theorem. Bolzano-Weierstrass theorem. Properties of separable, complete, compact, locally-compact and connected spaces. Cantor's set. Continuity and uniform continuity of mappings on metric space. Topological spaces:

Definitions, examples, accumulation points, closed sets, closure, interior, exterior and boundary of a set. Neighbourhoods, and neighbourhood systems. Coarser and finer topologies, subspaces and relative topologies. Base for a topology sub bases.

### **MTH 411: Measure Theory and Integration (3 C)**

Measure Theory: Measure of open, closed sets. Outer and inner measure. Measurable sets. Properties of measure. Non-measurable sets. Measurable in the sense of Borel. Measurable space. Measurable functions. Simple function Algebra. The Lebesgue integral: Lebesgue measure. Integral of non-negative function. Integral as measure of ordinate set, as a limit of approximate sums. Integral of an unbounded function. Integral over an infinite range. Simple properties of the integral. Sequences of integral (Positive functions; functions with positive and negative values). Lebesgue monotone convergence theorem. Fatou's Lemma, Dominated convergence. Beppo's Lemma-Bounded Convergence. Sets of measure zero. Integration by parts. Fubini's theorem and applications to multiple integrals.

### **MTH 412: Functional Analysis II (3C)**

Normed Linear Space: Definition and examples. Convex sets. Norms. Holder's and Minkowski's inequalities. Riesz-Fischer theorem. Linear operations on finite dimensional spaces. Linear functionals on normed spaces. Banach spaces, examples. Quotient spaces. Inner product spaces. Topological linear spaces. Hilbert space, examples. Linear operators in Hilbert spaces. Adjoint operators. Hermitian operators. Orthogonality; orthogonal complement and projections in Hilbert spaces.

### **MTH 421: Ordinary Differential Equations (3 C)**

Existence and uniqueness theorems, dependence of solution on initial data and parameters. Properties of solutions. General theory for linear differential equation with constant coefficients, the two-point Sturm-Liouville boundary value problem, self-adjointness, linear and non-linear equations, Theorems and solution of Lyapunov equation. Controllability and observability.

## **B.Sc. (Ed) Agricultural Science**

### **Graduation Requirements**

To be eligible for the award of the B Sc.(Ed.) Agricultural Science, a student must have passed a minimum of 140 and 111 credit units for the four- year and three-year degree programmes respectively. That is:

- For a four-year degree course, a minimum of 140 units should be required for graduation.
- For a direct three-year course, a minimum of 111 units should be required for graduation.
- At the commencement of the programme, each student is furnished with the information specifying the requirements for the award of the degree.
- Students must pass all core and GST courses.

**Table 14: B.Sc. (Ed) Agricultural Science**

<b>(a) 100 Level</b>			<b>First</b>	<b>Semester</b>		
<b>S/ N</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Level</b>	<b>Semester</b>	<b>Credit Unit(s)</b>	<b>Status</b>
1	GST 101	Use of English and Communication Skills I	100	First	2	C
2	GST107	The Good Study Guide	100	First	2	C
3	EDU111	Foundations of Education	100	First	2	C
4	CIT101	Computer in Society	100	First	2	C
5	BIO101	General Biology I	100	First	2	C
6	BIO191	Introductory Practical	100	First	1	C

Biology I						
7	CHM101	Introductory Inorganic Chemistry I	100	First	2	C
8	CHM103	Introductory Physical Chemistry	100	First	2	C
9	CHM191	Introductory Chemistry Practical I	100	First	1	C
<b>Total Credit Units</b>					<b>16</b>	

**( b ) 100 Level Second Semester**

S/ N	Course Code	Course Title	Level	Semester	Credit Unit(s)	Status
1	GST102	Use of English and Communication Skills II	100	Second	2	C
2	EDU112	Professionalism in Teaching	100	Second	2	C
3	EDU114	History of Education	100	Second	2	C
4	BIO102	General Biology II	100	Second	2	C
5	BIO192	General Practical Biology II	100	Second	1	C
6	CHM192	Introduction to Practical Chemistry II	100	Second	2	C
8	CIT132	Programming in Basics	100	Second	2	C

		<b>Total Credit Units</b>			<b>13</b>	
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**( c ) 200 Level First Semester**

S/N	Course Code	Course Title	Level	Semester	Credit Unit(s)	Status
1	GST 201	Nigeria Peoples and Culture	200	First	2	C
2	GST203	Introduction to Philosophy and Logic	200	First	2	C
3	EDU231	Curriculum Theory and Practice	200	First	2	C
4	EDU233	General Teaching Methods	200	First	2	C
5	SOS201	Principles of Soil Science	200	First	2	C
6	AGR201	General Agriculture	200	First	2	C
7	AEM201	Principles of Agricultural Extension	200	First	2	C
8	BIO201	Genetics I	200	First	2	C
10	AGR202	Introductory Agricultural Engineering	200	First	2	C
11	AGR203	Principles of Crop Production	200	First	2	C
		<b>Total Credit Units</b>			<b>20</b>	

**( d ) 200 Level Second Semester**

S/ N	Course Code	Course Title	Level	Semester	Credit Unit(s )	Status
1	EDU280	Agricultural Science Methods	200	Second	2	C
2	EDU212	Sociology of Education	200	Second	2	C
3	EDU214	Philosophy of Education	200	Second	2	C
5	AEM212	Farm Practice	200	Second	2	C
6	BIO220	Fisheries and Wildlife	200	Second	2	C
7	GST202	Fundamental s of Peace Study and Conflict Resolution	200	Second	2	C
8	CHM20 3	Organic Chemistry II	200	Second	2	C
9	AFS202	Principles Of Food Science and Technology	200	Second	3	C
10	AEM202	Principles of Rural Sociology			2	C
		<b>Total Credit Units</b>			<b>19</b>	

**( e ) 300 Level First Semester**

S/ N	Course Code	Course Title	Level	Semester	Credit Unit(s )	Status
1	EDU321	Psychology of Learning	300	First	2	C

2	GST301	Entrepreneurial Studies	300	First	2	C
3	ACP305	Principles of Crop Protection	300	First	2	C
4	EDU323	Basic Research Methods in Education	300	First	2	C
5	EDU335	Teaching Practice I	300	First	3	C
7	ANP313	Poultry Production	300	First	2	C
8	ACP303	Permanent Crop Production	300	First	2	C
9	SOS301	Introduction to Pedology and Soil Classification	300	First	2	C
10	ANP301	Introduction to Non-Ruminant Animal Mgt	300	First	2	C
11	AEM302	Extension, Teaching, Learning Process And Methods	300	First	2	C
		<b>Total Credit Units</b>			<b>21</b>	

**( f ) 300 Level Second Semester**

S/ N	Course Code	Course Title	Level	Semester	Credit Unit(s)	Status
1	EDU332	Educational Technology	300	Second	2	C



2	EDU314	Comparative Education	300	Second	2	C
3	EDU336	Post Teaching Practice Evaluation and Feedback	300	Second	2	C
4	SED305	Practicum in Science Education	300	Second	2	C
5	AEC308	Principles Of Farm Management	300	Second	2	C
6	AEC306	Farm Records and Accounting	300	Second	2	C
7	AGM314	Introduction to Farm Mechanisation	300	Second	2	C
9	ANP302	Ruminant Animal Production	300	Second	2	C
10	EDU300	SIWES I	300	Second	3	C
		<b>Total Credit Units</b>			<b>19</b>	

**( g ) 400 Level First Semester**

S/N	Course Code	Course Title	Level	Semester	Credit Unit(s)	Status
1	EDU421	Guidance and Counselling	400	First	2	C
2	EDU423	Measurement and Evaluation	400	First	2	C
3	EDU435	Teaching Practice II	400	First	3	C



figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

**GST 102: Use Of English and Communication Skills II (2 C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

**GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature and his origin, man, environment and resources, Great Nigerian Scientists.

**GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organized, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks and lectures, learning from T.V and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay, conclusion. How to write essays: Introduction, the craft of

writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

### **GST 201: Nigerian People and Culture**

The Culture and Peoples of Southern and Northern Nigeria in Pre-colonial Times, The Dynamics of the Evolution of Nigeria as a Political Unit, The Culture of the Niger Delta; Rain Forest; Guinea and the Sudan Savanna Regions of Nigeria, A Historical Analysis of Education and National Development, Economy and National Development, Religion and National Development in Nigeria. A Historical Analysis of Moral and Socio-political Rights of Citizens, Social Justice and National Development in Nigeria.

### **GST 202: Fundamentals Of Peace Studies and Conflict Resolution**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis and Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

### **GST 203: Introduction to Philosophy and Logic**

Definition and Scope of Philosophy, Philosophy as the Parent Discipline, Branches of Philosophy, Philosophy and Other Disciplines, Sources of Knowledge and Criteria for Knowing. Definition and Scope of Logic, Logic's Vocabulary, Valid, Invalid, Deductive and Inductive Arguments, Language and its Functions. Fallacies, Definitions, Categorical Propositions, Syllogisms, Symbolising in Logic, Truth Table Analysis, Logical Proofs of Validity Using Truth Tables, Rules of Inference and Argument Forms, Laws of Thought.

### **GST 301: Entrepreneurship Studies**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

### **CIT 101: Computers in Society**

What is Computer, Elements of a Computer: Hardware and Software, How to Work with a Computer, Operating Systems, and Files. Word Processing: Introduction to Word Processing, Word Processing Program Facilities, Copying text, Saving Changes, and Formatting. Spreadsheet: Entering and Correcting Data, Using Formula, Numeric Formats, Creating Charts, Charts from Non-adjacent Data, Embedded Charts, Charts Links and Chart Types. PowerPoint and Presentations: Presentation Screen, Creating New Presentations, Naming Presentations, Saving Presentations and Formatting Slides, Using Auto-shapes. Networking, Internet and Electronic mail.

### **EDU111: Introduction to Foundations of Education (2 C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

### **EDU 112: PROFESSIONALISM IN TEACHING (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession

### **EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

### **CHM 111: Introduction to Inorganic Chemistry (2 C)**

Hypothesis, theory and law with appropriate illustrations. Nature of matter – 3 states of matter, atomic structures, electronic energy levels and orbitals. Periodic classification of elements and its relationship to their electronic configuration. Chemical bonding, survey of properties and trends in groups I, II, IV, V & VII metal

### **CHM 191: Introductory Practical Chemistry I (2 Units)**

Practical based of CHM 101 and CHM 103: Cations and anions – identification, Acid- base titrations, Redox reactions and determinations.

**CHM 102: Introductory Organic Chemistry (2 Units)**

Simple reactions of hydrocarbons, alcohols, and acids. Petroleum chemistry, Oils and fats, hydrogenation of oils, polymer and biologically important molecule.

**CHM 104: Introductory General Chemistry (2units)**

Units and measurements in chemistry, the atomic theory, quantum theory and mechanics. Electronic configuration of the elements, chemical bonding. Gaseous, liquid and solid states. Energy term, chemical kinetics, Redox reaction, acid and bases, ionic equilibrium, coordination complexes, extraction of element

**MTH 121: Linear Algebra I (2 C)**

Definition of a matrix and types of matrices; equality of matrices; transpose of a matrix;; Hermitian matrix; Skew Hermitian; Matrix Algebra; Properties of matrix addition; Scalar multiplication; matrix multiplication. Linear equations; linear equation in two unknowns; General systems of linear equations. Determinants of 2 X 2 matrix; Determinants of 3 X 3 matrix; properties of determinants; Inverse of matrices; Inverse of a square matrices; Inverse of a non – singular 2X 2 matrix; Inverse of a # X 3 square matrices; Invertible matrices and determinants; Row Echelon form and system of equations; solving systems of equation by row; Reduced Echelon form; Determinant and systems of equations; Transformation of the plane; some properties of transformation; Vector spaces; Definitions; Subspaces; ranks of a matrix linear dependence; Basic of vector; Wronkian of functions.

**BIO 102: General Biology II (2 Units)**

Systematic studies of diversity of life including monera, protista, plants (Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and angiosperms) and animals (Protozoa, Platyhelminthes, Annelids, Arthropods, Fishes, Amphibians, Reptiles, Birds and Mammals) based on similarities and differences in external morphology. Taxonomic divisions of plant and animal kingdoms. Ecological adaptations of these forms.

**BIO191: General Biology Practical I (2 Units)**

What practical work in biology involves. Laboratory organisation. Handling common laboratory equipment. Microscopic handling and maintenance. Making microscopic measurements. Procuring animal materials for practicals. Killing, preserving and maintaining animal materials. Procuring plant materials. External features of plants (differences and similarities). Preparation of temporary slides. Preparation of stains and reagents. Techniques for microbial culture and grain staining. Setting up demonstration for physiological processes in plants. Setting up apparatus for demonstrating physiological processes in animals. Preparation required for dissection.

**BIO 192: General Biology Laboratory II (2 Units)**

Observation and description of the morphological and diagnostic features as well as the differences among the different phyla of the plant, animal, archebacteria, eubacteria, fungi and protista kingdoms. Identification of the taxonomic hierarchy of the members of the above groups. Study of the structure and functions of their parts and habitats specifications

**CHM 132: Introduction to Organic Chemistry (2 C)**

Simple reactions of hydrocarbons, alcohols and acids, petroleum chemistry, oils and fats. Hydrogenation of oils. Polymer and biological important molecules.

**MTH 102: Introductory Statistics (2 C)**

Measures of central tendency and dispersion, (grouped and ungrouped); mean: - arithmetic and geometric, harmonic, median, mode quartiles, deciles, modes, relative and absolute dispersion, sample space and events as sets. Finite probability space properties of probability. Statistical independence and conditional probability. Tree diagram. Bayes theorem. Discrete and continuous random variables. Expectation, independent Bernoulli trials. Binomial Poisson and Normal distributions. Normal approximation to binomial and Poisson distribution, Hyper geometric.



### **EDU 231: Curriculum Development Theory and Practice (2 C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning: - Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:-

Criteria for Selection, Programme of Studies Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:-

Guidance – oriented Evaluation, Selection – oriented Evaluation

### **EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialization:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

### **EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages

In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questioning, Questions in Classroom: The teacher's questions, the pupil's questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical Environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-Visual in Teaching, Types of Audio-visual Aids and their uses.

**EDU214: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Logic and education; Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

**AGR 201: General Agriculture (3 C)**

The distribution of agriculture: World population and food supply, history, scope and importance of agriculture to man. Agriculture and

natural environment. Characteristic features of tropical agriculture and how they affect production. Land use and tenure. Trends in the production, distribution and utilisation of agricultural products. Measures of improving Nigerian Agriculture Climatic edaphic and social factors in relation to crop production and distribution in Nigeria. Systems of crop farming. Types, distribution and significance of farm animals; basic principles of animal farming. Place of forestry, fish farming and wildlife in agriculture.

**SOS 203: Introduction to Agro-Climatology (2 C)**

The principles, aims and scope of climatology; The elements and control of climate and weather and the dynamics of the earth's atmosphere; Radiation and heating of the atmospheric system, atmospheric moisture, the dynamics of pressure and wind systems; Condensation and precipitation processes; Season variations in temperature, day length, radiation, rainfall and evapotranspiration; Equipment and maintenance of standard meteorological stations; The tropical climatic: The relationship between agriculture and climate with reference to crops, livestock, irrigation, pests and diseases.

**AEM215: Agricultural Botany (2 C)**

Microscope and its manipulation; introduction to plant taxonomy; characteristics of the following crop families – Sreculiarae, Malvaceae, Rubiaceae, Euphobiceae, Diocorreaceae, Mucaceae, and Rutaceae; recognition of members of each family, factors of environment and their effects on crop distribution in Nigeria: Photosynthesis, transpiration; Nitrogen metabolism; growth regulators and their relation to crop performance and yield.

**AEC251: Principles of Micro-Economics I (2 C)**

Price system and its limitations in resource allocation. Opportunity cost; private versus social. The law of supply and demand. Concept of Elasticity. Price theory and some applications; Equilibrium price and stabilization programmes. Production cost and revenue functions. The theory of production, consumption and resource allocation, with emphasis on Agriculture.

**ANP 241: Anatomy And Physiology of Farm Animals (2 C)**

Parts of the beef cattle, dairy, sheep, goats, pigs, rabbits and poultry. Fundamentals of cell biology. Anatomy and physiology of tissues-tissues types; Anatomy and physiology of systems-system types nervous skeletal, muscle, circulatory, reproductive, digestive and other systems of farm animals; physiological functions of farm animals-homo-eostasis, nutrition and digestion, respiration, temperature regulation; The doctrine system in blood circulation, lactation, milk let down, egg production, water balance, etc.

**CHM 211: Introduction to Inorganic Chemistry II (2 C)**

Chemistry of first row transition metals. Introduction to co-ordination Chemistry including elementary treatment of crystal field theory. Comparative Chemistry of the following elements: (a) Ga, In, Tl, (b) Ge, Sn, Pb, (c) As, Sb, Bi (d) Se, Te, Po. Elementary introduction to Organometallic Chemistry. Role of metals in biochemical Systems

**AEM 202: Introduction to Rural Sociology (2 C)**

Meaning, importance, and basic concepts and principles of rural sociology. Rural versus urban living. Culture, cultural values and cultural environment. Settlement patterns and village organisation. Factors which influence rural living conditions. Types of rural economics. Problems of developing rural economies. Rural infrastructures. Major rural social institutions – marriage and family, religion, politics. Social theories and interactions. General strategies to rural development, role of communities. Social aspects of production and marketing in the rural areas. Communication and technological change in rural society.

**ANP 202: Principles of Animal Production (2 C)**

Animal production and its development. The livestock industry – problems and prospects. Description of the breeds of cattle, sheep, goats, pigs, poultry and rabbit. Systems of livestock production. Feeding habit of farm animals. Principles of breeding and livestock judging. General principles of management of the different types of farm animals.

### **AEM 212: Farm Practice (Practical) (3 C)**

This will involve field planting. Each student will be allocated a field plot for the planting and management of an arable crop. They will be exposed to practical work in animal production and health.

- (i) Crop Production techniques (Arable crops etc), crop protection (pest and disease control) to acquire general knowledge in field operation, seed bed preparation, sowing, weeding and other cultural operations, harvesting and cost analysis, raising of horticultural crops; transplanting techniques, application of insecticides, fungicides and herbicides. Collection and identification of weeds in horticultural crops.
- (ii) Animal husbandry techniques cattle, sheep, goats, poultry, pigs and rabbits and health management – general husbandry practices of the above animals. Techniques of feeding different classes of livestock, feed formulation, feed processing and preservations and food analysis. Hatching management, simple identification techniques, castration, dehorning, debeaking and milking parlour management and milking techniques. Livestock farm planning, layout, housing fencing and provision of water.
- (iii) Extension practices: How to conduct plot demonstration, farm adoptive research, fortnightly training for extension agents, communication processes. How to conduct farm meeting, brain storming, focus group discussion, small group discussion, interview methods, production of hand bills, leaflet, bulletin board etc, film projector slide, film projector. Trips to MANR, ADP, AGRO-Service centres and information collection. Use of other mass media (TV and Radio) for farmers' awareness

### **AFS 202: Principles of Food Science and Technology (3 C)**

Definition and scope of food science and technology. Food distribution and marketing. Food and its functions. Food habits. Food

poisoning and its prevention. Principles of food processing and preservation. Discussion of different preservation methods. Deterioration and spoilage of foods, other post harvest changes in food. Contamination of foods from natural source. Composition and structures of Nigeria/West African food; factors contributing to texture, colour, aroma and flavour of food. Cost; traditional and ethnic influences of food preparation and consumption pattern.

**CHM 232: Introduction to Organic Chemistry II (2 C)**

Factors affecting structure and physical properties of organic compounds; factors affecting availability of electrons, stereochemistry; energy of activation and free radical substitution reactions in alkenes. Functional group chemistry. Electrophillic and nucleophilic substitution reactions. Aromaticity. Various type of organic reactions; e.g. addition, free radical, elimination and substitution reactions.

**AEM246: Youth Organisations in Agriculture(2 C)**

History, objectives and types of youth organisations in agriculture e.g. young farmers club in young foresters, future farmers of Nigeria, etc. Comparative analysis of youth organisations in cities, urban and rural settings. Roles of youths in farming families and settlements. Problems and prospects of retaining youths in rural communities. Roles of members, patrons, advisers, volunteers, etc. in organisations. Youth organisations and clubs in school management. State, regional and national organisations in agriculture.

**EDU 321: Psychology of Learning (2 C)**

Definitions of psychology & learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – Skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application.

**EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process, The experience, Theory of Learning, learning and Communication in the classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instructional, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**EDU 323: Basic Research Methods (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value

**EDU 314: Comparative Education (3 C)**

Scope and meaning of education, examination of significant differences and similarities in education policy and practices in selected societies, problems of educational development in developing countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**FRM 422: Forest and Wildlife Extension Education (2 C)**

Management interpretation to include methods and techniques for communicating of forestry, parks, game reserve and other wild lands;

the role of the extension agents in providing organisational and administrative support in forestry; training programmes for extension workers in forestry and wildlife.

### **AEM 458: Extension Strategies in Pilot Rural Development Projects (3C)**

Objectives of pilot projects for coordinating scientists, official and non-official agencies, local people, purchase and distribution of input, marketing, training of staff and local people and their organisation building development models

### **SED 305: Practicum in Science Teaching (2C)**

Students are expected to carry out activities in their respective areas of specialisation as stated below.

#### **Agric Practicum**

Activities in Farm tools & Machinery, Methods in Farm Surveying, Management of Farm Animals, Construction of Egg candler & candling, Soil and Soil experiments, Rocks & Rock Formation, Floriculture .

#### **Biology Practicum**

Activities on Microscopy cell division, Construction of quadrat, Ecosystem, Improvisation of necessary instrument in Biology e.g. Rain gauge, ACC paper wind vane etc. Activities on genetical principles, Construction of Herbarium, Staffing of Animals, Skeleton.

#### **Physics Practicum**

Activities on Graphs and Data handling, Activity on measurement of Mass, Experiment on Mechanics, Experiments on light.

#### **Chemistry Practicum**

Activities on separation Techniques, Preparation of standard solutions, Activities on volumetric Analysis, Qualitative analysis, Test for gases activities on Identification of rations.



### **Integrated Science Practicum**

Activities on Microscopy, Improvisation of an ecosystem, Activities on Energy transformation, Simple machines, Thermo dynamics, Test for gases, Separation techniques, Activities on Volumetric Analysis.

### **Mathematics Practicum**

Improvisation of Abacus Counters

Using improvised materials to teach shapes such as triangle, circle square etc.

Using simple games to teach elementary mathematics.

### **Computer Science Practicum**

Activities on computer games, Improvising computer, Activities on computer virus.

**Note:** The activities for each of the sciences listed above will include post teaching practice discussion and remediation (EDU336).

### **EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice;
- The lesson notes used during the teaching practice;
- Assessment questions as well as the marking guides used;
- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the Study Centre Director for:

- Evaluation
- Feedback, and

- Remediation.

The result of the overall process should be communicated to the student from the Dean through the Study Centre Director.

### **ANP301: Introduction to Non-Ruminant Animal Management (2C)**

Management of breeding stocks, growing and young animals. Housing, equipment and feeding principles of poultry, rabbits and pigs. Production and management practices, livestock Economics, Health management of stock, processing and marketing of poultry.

### **ACP 301: Arable Crop Production (2 C)**

Origin, distribution, soil and climatic requirements of cereals, legumes, root crops, fibre crops, vegetables and other important animals crops in Nigeria. Improved varieties. Production practices, harvesting, utilisation, processing, storage and economic aspects of some selected arable crops.

### **ACP 305: Principles of Crop Protection (2 C)**

The major pests, insects, fungi, bacteria, viruses and nematodes, weeds and other diseases of tropical crops and stored products. Definition of pests. Study of insects of major local crops, their significance and principles of control. Study of the effects of diseases causes by virus; bacteria, fungi nematodes. Control of these disease. Effect of weeds on crops and livestock and the principles and methods of control or weed. Brief outline, shortcomings and advantages of different pest assessment and pest control methods. Strategies of integrated pest control and pest management.

### **ANP 302: Ruminant Animal Production (2 C)**

Management of breeding stock, growing and young animal, Housing equipment and feeding principles of cattle, sheep and goats. Production and management practices. Health management of ruminant animals. Products.

**AEC 308: Principles of Farm Management (2 C)**

Nature and scope of farm management. Basic principles of farm management. Special characteristics of agriculture that affect management decisions. The decision making functions of farm manager. The common concepts and tools in management: - law of diminishing returns, farm cost, valuation, depreciation as they affect the farmer. The literate versus illiterate farmer in carrying out farm management functions.

**AEC 306: Farm Records and Accounting (2 C)**

Scope of farm records and accounting, and their objectives, Basic concepts of accounting. Principles of book-keeping and accounting, kings, functions of farm records and accounts. Concepts of trial balance and final accounts.

**CPS 313: Basic Soil Science (2 C)**

Soil formation; rocks and minerals; physical composition of soils; soil texture; soil structure; soil water section; soil moisture retention curve; concept of available water; movement of water in the soil; measurements of dynamic soil physical properties; importance and characteristics of alunminosilate clays and organic colloids; cations and anions exchange; sources of charge in soil colloids; cations exchange capacity; soil PH; exchange and reserve acidity; principles of limming; soil organisations

**EDU 421: Guidance and Counseling (2 C)**

Meaning, Purpose and Development of Guidance and Counseling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counseling Service:- Nature, Purpose and Theories of Counseling; The Counsellor and the counseling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counseling:- Values and attitude orientation, Guidance

as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

The course x-rays the concept of special education, its definition and origins. It examines integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**AEM 405: Extension Training and Curriculum Development (3 C)**

Meaning of extension training, importance of extension in agricultural development; objectives of the different types of training (e.g. pre-service and in-service training) programmes for different categories of extension personnel. Method of extension training, farmers. Training; programmes; curriculum development processes; organisation of the causes and evaluation of training programmes.

**AEM 411: Social Relationships and Behavioural Change (3 C)**

Social relationship as an analytical unit in agricultural extension system, social relationship as an indicator of individuals and groups, innovation process, major theories of behavioural change in agriculture, programme planning.

**AEM 405: Extension Training and Curriculum Development (3 Units)**

Meaning of extension training, importance of extension in agricultural development; objectives of the different types of training (e.g. pre-

service and in-service training) programmes for different categories of extension personnel. Methods of extension training, farmers. Training; programmes; curriculum development processes; organization of the causes and evaluation of training programmes.

**AEM 411: Social Relationships and Behavioural Change (3 Units)**

Social relationship as an analytical unit in agricultural extension system, social relationship as an indicator of individuals and groups, innovation process, major theories of behavioural change in agriculture, programme planning.

**AGE 419: Seminar in Agriculture (2 C)**

Each student is expected to prepare and prepare a seminar. Instruction on the preparation, presentation and discussion of critical reviews of topics important to agriculture. This is to be followed by students' presentation of reviews prepared by them.

**AGE421: Teaching Vocational Agriculture (2 C)**

History of vocation agricultural in Nigeria, developing a course of study and programme of work, preparing teaching plans, methods of teaching vocational agriculture, young and adult farmer courses in schools, organizations and supervision of unit and school supervision of agricultural unit and school farm, and development of public relations, practical teaching in neighbouring schools.

**AEC 402: Economics of Cooperatives (3 C)**

Cooperatives as a form of business; purpose and advantages of cooperatives to agriculture; comparison of other business with cooperatives business; cooperatives theory; historical evolution of cooperative structure and organisation of cooperatives in agriculture; management of cooperatives.

**ANP 424: Pasture and Range Management (2 C)**

The place of pasture in the Nigerian agricultural economy; introduction to the vegetation belts of Nigeria with emphasis on the vegetation belt. Agronomy and identification of native (natural) pasture plants and adapted (introduced ) ones (grasses and legumes);

geographical distribution of natural pastures in Nigeria; principles of plant introduction; pasture establishment; management and evaluation; factors affecting the nutritive value of forages and forage intake; forage conservation and grazing management of pastures.

## **B.Sc. (Ed) Biology**

### **Graduation Requirements**

To be eligible for the award of the BSc. (Ed.) Biology, a student must have passed a minimum of 134 and 96 credit units for the four- year and three-year degree programmes respectively. That is:

- For a four-year degree course, a minimum of 134 units should be required for graduation.
- For a direct three-year course, a minimum of 96 units should be required for graduation.
- At the commencement of the programme, each student is furnished with the information specifying the requirements for the award of the degree.
- Students must pass all core and GST courses.

**Table 15: B.Sc. (Ed) Biology**

**(a) Year 1**

**First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
BIO 101	General Biology 1	2	C
BIO 191	General Practical Biology 1	2	C
PHY101	Elementary Mechanics, Heat and Properties of Matter	3	C
EDU 111	Foundations of Education	2	C
GST 101	Use of English and Communication Skills I	2	C
GST 107	The Good Study Guide	2	C
CIT 101	Computers in Society	2	C
CHM 191	Introductory Practical Chemistry 1	2	C

	<b>Total</b>	<b>17</b>	
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**(b) Year 1** **Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit</b>	<b>Status</b>
BIO 102	General Biology II	2	C
CHM 103	Introduction to Physical Chemistry I	2	C
PHY102	Electricity, Magnetism Modern Physics	3	C
BIO 192	General Biology Practical II	2	C
GST 102	Use of English and Communication Skills II	2	C
EDU 114	History of Education in Nigeria	2	C
EDU 112	Professionalism in Teaching	2	C
CHM 102	Introductory Organic Chemistry I	2	C
CHM 106	Introductory General Chemistry	2	C
CHM192	Introductory Chemistry Practical II	1	C
PHY192	Introductory Physics Laboratory II	1	C
	<b>Total</b>	<b>21</b>	

**(c) Year II** **First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
GST 201	Nigerian Peoples and Culture	2	C
EDU 231	Curriculum Theory and Practice	2	C
EDU 233	General Teaching Methods	2	C
BIO 203	General Physiology I	2	C
BIO	Genetics I	2	C



201			
BIO 209	Chordates	3	C
CHM 203	Organic Chemistry II	2	C
BIO 207	Lower in Vertebrates	2	C
CHM 201	Physical Chemistry II	2	C
CHM 205	Inorganic Chemistry II	2	C
	<b>Total</b>	<b>21</b>	

**(d) Year II**

**Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit (s)</b>	<b>Status</b>
GST 203	Introduction to Philosophy and Logic	2	C
GST 202	Fundamentals of Peace and Conflict Resolution	2	C
EDU 250	Subject Methods I (Biology)	2	C
ESM 112	Introductory Ecology	2	C
BIO 204	Biological Techniques	2	C
EDU 212	Sociology of Education	2	C
EDU 214	Philosophy of Education	2	C
BIO 208	Seedless Plants	2	C
BIO 210	Seed Plants	2	C
	<b>Total</b>	<b>18</b>	

**(e) Year III First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit (s)</b>	<b>Status</b>
EDU 335	Teaching Practice I	3	C
GST 301	Entrepreneurship Studies	2	C
EDU 321	Psychology of Learning	2	C
EDU 323	Basic Research Methods in Education	2	C
BIO 301	Genetics II	2	C
BIO 303	General Cytology	2	C
BIO 305	Molecular Biology	2	C
	<b>Total</b>	15	

**( f ) Year III Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit (s)</b>	<b>Status</b>
EDU 332	Educational Technology	2	C
EDU 314	Comparative Education	2	C
EDU 336	Post Teaching Practice Evaluation	2	C
BIO 304	General Ecology	2	C
SED 305	Practicum in Science Teaching	2	C
BIO 306	General Physiology II	2	C
BIO 307	Evolution	2	C
BIO 311	Mycology	2	C

	<b>Total</b>	<b>16</b>	
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**( g ) Year IV**

**First Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU 421	Guidance and Counselling	2	C
EDU 423	Measurement and Evaluation	2	C
EDU 435	Teaching Practice II	3	C
BIO 403	Population Genetics	2	C
BIO 408	Soil Ecology	2	C
BIO 413	Developmental Biology	2	C
	<b>Total</b>	<b>13</b>	

**( h ) Year VI**

**Second Semester**

<b>Course Code</b>	<b>Course Title</b>	<b>Credit Unit(s)</b>	<b>Status</b>
EDU 412	Principles of Educational Management	2	C
EDU 420	Research Project	4	C
EDU426	Special Education	2	C
BIO 413	Developmental Biology	2	C
Bio 412	Wildlife Ecology and Conservation	3	C
	<b>Total</b>	<b>13</b>	

- **Students must offer a maximum of 30 credit units.**

## Course Content Specification

### **GST 101: Use of English and Communication Skills I (2C)**

Listening enabling skills, listening and comprehending comprehension, note taking and information retrieval. Including data, figures, diagrams and charts. Listening for main idea, interpretation and critical evaluation. Effective reading. Skimming and scanning. Reading and comprehension at various speed levels. Vocabulary development in various academic contexts. Reading diverse texts in narratives and expository. Reading and comprehension passages with tables, scientific texts. Reading for interpretation and critical evaluation.

### **GST 102: Use of English and Communication Skills II (2C)**

Writing paragraphs: Topic sentence and coherence. Development of paragraphs: illustration, Description, cause and effect including definitions. Formal letters; essential parts and stylistic forms, complaints and requests; jobs, ordering goods, letters to government and other organisations. Writing reports; reporting event, experiments. Writing summaries: techniques of summarising letters and sounds in English, vowels and consonants. Interviews, seminar presentation, public speech making, articles, concord and sentences including tenses. Gerund, participles, active, passive and the infinitive. Modal auxiliaries.

### **GST 105: History and Philosophy of Science (2 C)**

Nature of science, scientific methods and theories, law of nature, history of science, lost sciences of African, science, technology and inventions, nature and scope of philosophy in science, man, nature and his origin, man, environment and resources, Great Nigerian Scientists.

### **GST 107: The Good Study Guide (2 C)**

Getting Started: How to use the book, why read about study skills, getting yourself organized, what is studying all about, reading and note-taking: introduction, reactions to reading, your reading strategy, memory, taking notes, conclusion. Other ways of studying: Introduction, learning in groups, talks and lectures, learning from T.V

and Radio broadcasts, other study media. Working with numbers: Getting to know numbers, describing the world, describing the tables, describing with diagrams and graphs, what is good writing? The importance of writing, what does an essay look like, what is a good essay, conclusion. How to write essays: Introduction, the craft of writing, the advantages of treating essay writing as a craft, making your essay flow, making a convincing case, the experience of writing. Preparing for examination.

### **GST 201: Nigerian People and Culture**

The Culture and Peoples of Southern and Northern Nigeria in Pre-colonial Times, The Dynamics of the Evolution of Nigeria as a Political Unit, The Culture of the Niger Delta; Rain Forest; Guinea and the Sudan Savanna Regions of Nigeria, A Historical Analysis of Education and National Development, Economy and National Development, Religion and National Development in Nigeria. A Historical Analysis of Moral and Socio-political Rights of Citizens, Social Justice and National Development in Nigeria.

### **GST 202: Fundamentals of Peace Studies and Conflict Resolution**

Basic Understanding of Conflict; Definitions, Causes and Types of Conflict, Conflict Theories, Phases in Conflict, Conflict Analysis & Transformation. Dynamics of Conflict; Relationship between Perception and Conflict, Language Barriers in Conflict and Resolution, Early Warning and Early Response Mechanism, Arms Control and Demilitarisation, Peace and Education. Trends in Global Issues: International, Continental and Regional Organisations in the Pursuance of World Peace, Peaceful Methods of Conflict Resolution, Coercive Means of Conflict Resolution, Gender Issues and Humanitarian Intervention.

### **GST 203: Introduction to Philosophy and Logic**

Definition and Scope of Philosophy, Philosophy as the Parent Discipline, Branches of Philosophy, Philosophy and Other Disciplines, Sources of Knowledge and Criteria for Knowing. Definition and Scope of Logic, Logic's Vocabulary, Valid, Invalid,

Deductive and Inductive Arguments, Language and its Functions. Fallacies, Definitions, Categorical Propositions, Syllogisms, Symbolising in Logic, Truth Table Analysis, Logical Proofs of Validity Using Truth Tables, Rules of Inference and Argument Forms, Laws of Thought.

### **GST 301: Entrepreneurship Studies**

Definition of Entrepreneurship, Relationship Between Entrepreneurship and Small Business Management, Factors of Entrepreneurship; Dealing with External Factors of Entrepreneurship; Factors of Production; Profit and Other Objectives of an Entrepreneur, the Business Environment, Understanding Viability Study; Needs and Characteristics of Consumers; Mission and Enterprise Objectives; Export Market Shares; Target Market; Income Determination; Break-even Point, Size of the Business, Location Factors; Financial Requirements Forms of Ownership; Business Plan. Risk Analysis; Legal Requirements; Staffing, Purchasing; Production; Management.

### **CIT 101: Computers in Society**

What is Computer, Elements of a Computer: Hardware and Software, How to Work with a Computer, Operating Systems, and Files. Word Processing: Introduction to Word Processing, Word Processing Program Facilities, Copying text, Saving Changes, and Formatting. Spreadsheet: Entering and Correcting Data, Using Formula, Numeric Formats, Creating Charts, Charts from Non-adjacent Data, Embedded Charts, Charts Links and Chart Types. PowerPoint and Presentations: Presentation Screen, Creating New Presentations, Naming Presentations, Saving Presentations and Formatting Slides, Using Auto-shapes. Networking, Internet and Electronic mail.

### **EDU 105: Introduction to Foundations of Education (2C)**

Philosophical and psychological perspective, philosophy of education, meaning and relevance, equality of educational opportunity, psychology of education, introduction to learning theories, readiness to learning, motivation and its relation to learning, transfer of learning, historical and sociological perspective, concept and nature of education, types of education, the growth of education

in Nigeria, educational trends in Nigeria, innovations in education, the status of teachers in Nigeria, education and society, social class and educational opportunity, factors that influence education.

**EDU 112: Professionalism in Teaching (2 C)**

Concepts and issues in teaching, concepts of teaching and professionalism, history of teaching in Nigeria, professional growth of teachers, educating the educators, professional studies programs for teachers, the teacher and the child, why teachers should care, the making of ideal teacher, qualities of an ideal teacher, the role of the teacher, the Nigerian Union of Teachers (NUT), the role of Parent Teachers Association (PTA), the subject teachers association, the status of teachers in Nigeria, strategies for making teaching a profession

**EDU 114: History of Education in Nigeria (2 C)**

Nigeria traditional education, higher education in traditional society, Islamic education in Nigeria, in Nigeria, the early missionaries and the development of education in Nigeria, colonial government involvement in Nigeria Education 1872 – 1882, Education Ordinances 1887 – 1916, the impact of Phelps – Stokes Commission on Education in Northern Nigeria, Secondary Education from 1859 – 1929, Higher Education, The National Curriculum Conference and the National Policy on Education.

**CHM 101: Introductory Inorganic Chemistry (2 Units)**

Hypothesis, theory and law with appropriate illustrations, Nature of matter – 3 states of matter, Atomic structure, electronic energy levels and orbital. Periodic classification of elements and its relationship to their electronic configurations, Chemical bonding, Survey of properties and trends in groups I, II, IV, VI and transition metal

**CHM 102: Introductory Organic Chemistry (2 Units)**

Simple reactions of hydrocarbons, alcohols, and acids. Petroleum chemistry, Oils and fats, hydrogenation of oils, polymer and biologically important molecule.

**CHM 103: Introductory Physical Chemistry (2 Units)**

Mole concepts and calculations based on it, methods of expressing concentrations, Chemical Kinetics and equilibrium, and related calculations, Important application of equilibrium – pH, solubility products and solubility of ionic solids, Thermo chemistry and simple calculations based on Hess's law, Electrochemistry and working of various cells, Brief mentions of corrosion; chemical thermodynamics;  $\Delta G = \Delta H - T\Delta S$ .

**BIO 191: General Biology Practical I (2 Units)**

What practical work in biology involves. Laboratory organisation. Handling common laboratory equipment. Microscopic handling and maintenance. Making microscopic measurements. Procuring animal materials for practicals. Killing, preserving and maintaining animal materials. Procuring plant materials. External features of plants (differences and similarities). Preparation of temporary slides. Preparation of stains and reagents. Techniques for microbial culture and grain staining. Setting up demonstration for physiological processes in plants. Setting up apparatus for demonstrating physiological processes in animals. Preparation required for dissection.

**BIO 192: General Biology Laboratory II (2 Units)**

Observation and description of the morphological and diagnostic features as well as the differences among the different phyla of the plant, animal, archebacteria, eubacteria, fungi and protista kingdoms. Identification of the taxonomic hierarchy of the members of the above groups. Study of the structure and functions of their parts and habitats specifications.

**BIO 101: General Biology I (2 C)**

Cell structure and organisation; function of cellular organelles, diversity, characteristics and classification of living things, general reproduction, interrelationship of organism; heredity and evolution; elements of ecology and types of habitats.



**BIO 102: General Biology II (2 C)**

A generalised survey of the plant and animal kingdom based mainly on study of similarities and differences in the external features, ecological adaptation of these forms.

**EDU 231: Curriculum Theory and Practice (2 C)**

History of Curriculum Development in Nigeria: The importance of curriculum, Curriculum Development and/or Improvement in a developing country like Nigeria, Participants in Curriculum Planning:- Levels of Planning, Approaches to Planning, Curriculum Decisions:- Different Stages of Curriculum Decision, The 1969 National Curriculum Conference as a Case Study, Force affecting Curriculum Decisions, Aims and Objectives of Nigeria Education, Selection of Learning Experience:- Criteria for Selection, Programme of Studies, Programme of Activities, Programme of Guidance, Organisation of Learning Experience:- Traditional Organisation of Curriculum, New Dimension in Organisation. Evaluation:- Evaluation of Educational Programmes, Formative Evaluation (Action Research), Summative Evaluation, Evaluation of the Achievement of the Individual in the Programme:- Guidance – oriented Evaluation, Selection – oriented Evaluation

**EDU 212: Sociology of Education (2 C)**

Definition of Sociology, Education and Pedagogy from Sociological Perspective, Education and Society, Theory of Knowledge, Principles of the Sociology of Knowledge, Socialization:- Culture and Personality, Education and Social Frame Work:- The Family and Education, Education and Social Stratification – the Nigeria Elites, Education and Social Values, Moral Education in Changing Society; Education, Social Justice and the Teacher, Equality in Education, Freedom in Education. The Social Functions of Education – Education and Social Change, Education and Social Economic Development, The Political function of Education, The Sociology of Teaching:- The Teacher and his Role; The Reluctant Learner, The Teacher in the Classroom, Social Relations in the School.

**EDU 233: General Teaching Methods (2 C)**

The Teacher and the Child, How children learn, Professional attitudes and understanding of learners, The aims of the Teaching, The Stages In Lesson Preparation:- The Syllabus, The Scheme of work, Lesson Notes; Steps in preparation of notes, The problem of time –table. General Teaching Methods:- Induction Method, Deduction Method, Induction and Deduction Methods, The Lecture Method, Dramatic Method, Questioning and Problem Methods, The Project Methods, Activities in the Lesson, The Art of Classroom Management:- Qualities of a good teacher, Some common bad habits to avoid, Dealing with the problem of discipline in class. Questions and Questioning, Students Natural Curiosity and Enquiry, Aims in Questing, Questions in Classroom: The teacher’s questions, the pupil’s questions, Guidelines for questioning. Testing and Examinations, the purpose of testing, what to test, How and when to test, Characteristics of a good test, types of tests, marks and Assignments, Purpose of marking and assignments, Giving and marking assignments, Awarding and assigning marks and grades, methods of Study, Use of test book, Art of Note-Making, Organisation of work, Revision and review of work, Physical environment of the classroom, Preparation for examination. Use of Audio-Visual Aids, Importance of Audio-visual in teaching, Types of Audio-visual Aids and their uses.

**EDU 204: Philosophy of Education (2 C)**

Explaining concepts of education, (Aims: - goals, objectives, end, means); Philosophy and philosophers; Curriculum: The nature of education in Nigeria (metaphysics) – formal and informal education, auxiliary education, Liberal and vocational education. Knowledge and education in Nigeria – (Epistemology) Definitions of knowledge, Types of knowledge; Knowledge by divine revelation, By institution Prior knowledge, Posteriori knowledge, Need for knowledge in modern Nigeria morality and education (axiology) Define concepts of morality and education, Determinants of good education, Logic and education, Inductive and Deductive methods of teaching; Logic and curriculum planning, Logic and School Administration; Discipline; Freedom, Determination and Free will.

**BIO 211: Coelomate Invertebrates (2C)**

Organisation and Biology of higher metazoan groups. Anatomy and sexual dimorphism of the metazoans. Economic importance.

**BIO 212: Helminthology (2 Units)**

General classification and characteristics of nematodes, cestodes and trematodes, studies of their morphology and life cycles, epidemiology, pathogenesis and progenetic forms, diagnosis, control methods and economic importance. Practical components should give emphasis on parasite morphology and diagnostic techniques used to identify parasite species.

**CHM 202: Analytical Chemistry I (2 Units)**

Theory of errors, statistical treatment of data; Theory of sampling, chemistry methods of analysis including volumetric (acid base,, oxidation – reduction, precipitation and compleximetry); Physicochemical methods (Optical methods of analysis – UV/V), separation methods. pH notation and buffer solutions. Gravimetry solubility product and its application to separation methods of metals.

**CHM 203: Organic Chemistry II (2 Units)**

Factors affecting structure and physical properties of organic compounds; Factors affecting availability of electrons, Stereochemistry; Energy of activation and free radical substitution reactions in alkenes. Functional group chemistry. Electrophillic and nucleophillic substitution reactions. Aromaticity. Various type of organic reactions; e.g. addition, free radical, elimination and substitution reactions.

**CHM 204: Structure and Bonding (2 Units)**

Idea of quantum states. Orbital shape and energy, simple valence theory. Electron repulsion theory; atomic spectra. The structure and chemistry of some representative main group element compounds.

**CHM 205: Inorganic Chemistry II (2 Units)**

Chemistry of first row transition metals. Introduction to co-ordination Chemistry including elementary treatment of crystal field theory. Comparative Chemistry of the following elements: Ga, In, Tl, (b) Ge,

Sn, Pb, (c) As, Sb, Bi (d) Se, Te, Po. Elementary introduction to Organometallic Chemistry. Role of metals in biochemical Systems.

**BIO 213: Chemistry of Amino Acids and Proteins (2 C)**

Structure, properties and classification of Amino acids, Ph, pKa and buffer, peptide. Reactions of specific amino acids, separation of peptides, chemistry of proteins including their structural level and types of bonds stabilising them, properties, functions and classifications of protein, enzymes, vitamins

**BIO 216: Chemistry of Cho, Lipids and Nucliec Acids**

Classification of physical properties of carbohydrates, structure of glucose, projection and perspective formula, structure of properties of other monossacharides, brief treatment of dissacharides and polysacharides. Chemistry, classification and properties of lipids. Methods of analysis of lipids, lipoprotein, membrane and membrane structure. Chemistry of nucleic acids (bases, sugar and phosphate acids) Structure and roles of DNA and RNA.

**EDU 250: Biology Methods (2 C)**

Developing a point of view in Biology Teaching, Structural and Epistemological Foundation of Biology and implication for Teaching Strategies for Teaching Biology. Resources for Biology Teaching and Lab. Management; Evaluation of Biology, Teaching and Learning; School Biology – curricular; Biology organization project

**BIO 201: Genetics I (2 C)**

Hereditary and non-hereditary characteristics. Probability and tests of goodness of fit. Quantitative inheritance, variation in genome structure, introduction to population – genetics. Physical and chemical nature of genetic materials. Protein synthesis.

**BIO 112: Introduction to Ecology (2 C)**

Concepts and definition of ecosystem. Ecology at community level. Ecological classification of habitant types, terrestrial and aquatic biomass, specific features of each, biotic components of habitant, natural destruction, factors of communities, success of community interaction, natural cycle, dynamics of population. Practical to include

among others community and population studies of each species in a habitat.

**BIO 203: General Physiology 1 (2 C)**

Physical and chemical processes in animal and plant physiology. Basic elements of respiratory, photosynthesis, transportation or circulation, reproduction, germination, growth hormones and enzymology.

**BIO 204: Biological Techniques (2 C)**

Microscope, preparation of microscope slides, photometry, colorimetry, chromatography, candoctometry, experimental design.

**BIO 205: Introductory Development Cell Biology (2 C)**

History and present trends in cell biology; reproduction, cell division, cell differentiation and growth of cells. A brief study of the molecular basis of cell structure and development. Organelles, proteins and nucleus acids.

**BIO 207: Lower Invertebrates (2 Units)**

Systematic approach to invertebrates morphology and levels of organisation. Classification of Protozoa, Rhizopoda, Apicomplexa, Sarcomastigophora, Ciliophora, Parazoa; Porifera. Metazoan; Cnidaria, Platyhelminthes, Nematode, Annelida, Mollusca, Arthropoda, Echinodermata with emphasis on the differences and similarities among the groups; adaptive features to mode of life and their economic importance.

**BIO 208: Seedless Plants (2 Units)**

Account of systematics, morphology and reproduction, life histories and ecology of Algae, Fungi, Bryophytes and Pteridopytes, including fossils.

**BIO 209: Chordates (3 Units)**

Evolution, classification and general characteristics of vertebrate phyla. Evolution and adaptive radiation. Zoogeography.

**BIO 210: Seed Plants (2 Units)**

Detailed account of the origin and evolution of seed plants (angiosperms), the mode of reproduction, vascular elements, morphology and anatomy

**BIO 217: General Microbiology (3 Units)**

Historical aspects, scope of microbiology, general characteristics of microorganisms, growth and reproduction of microorganisms; sterilisation and disinfection; brief survey of microbes as friends and foes. Systematic classification of bacteria fungi, viruses, etc. Microbial variation and heredity; biological and biochemical reactions of microorganisms; cycles of elements in nature; Nitrogen fixation

**BIO 313: Animal Ecology (2 Units)**

The ecology of local terrestrial and aquatic animals; growth rate and age structure of animal populations; natality and mortality, survivorship curves. Life tables and K-factor analysis. Competition. The natural regulation of animal numbers. Population cycles. The dynamics of predator-prey systems. The ecology of African mammals. Behavioural ecology.

**EDU 321: Psychology of Learning (2 C)**

Definitions of psychology and learning; Theories of learning and the theorists levels of motivation and implication for education; Memory and forgetting, Types of memory, Method of improving memory, Types of forgetting, Factors influencing forgetting, Implication for education; Cognitive theory of learning; Reinforcement and punishment and classroom application; Behaviourism, Contributions of behavioral psychologists and classroom application; Transfer of learning and classroom application, S – R theory of Thorndike – skinner, Meaning of S – R, The Laws of readiness, Exercise and effect; Punishment; Classroom application

**EDU 332: Educational Technology (2 C)**

Definition of Instructional Technology, its Philosophy, Terminology, Roles of Instructional Technology in the Learning Process; The experience, Theory of Learning, learning and Communication in the

classroom, Learning has changed behaviour, The teacher's responsibilities, Selecting and using materials and media in Instructional, Visual aids, Non-projected aids, Projectors, Projected aids, Audio-visual aids, Creating Instructional Materials, Duplicators, Equipment Operation, projection, Recording.

**EDU 323: Basic Research Methods in Education (2 C)**

Meaning of Research; Scientific method of research, Selection of the topic, Subjects etc for research; Purposes of research studies; Guidelines in selection of topics, Preparing a research proposal, Statement of the problem; Determination of data required; Hypothetical conclusions and implication, Collecting information and data; Observation and interview methods, Basic consideration in data collection; The correspondence method; Analysis and interpretation of Data; Basic statistical concept and Their Computation, Designs of Experiments:- Basic types of errors; Simple Randomised Design, Random – Replications Design; Groups- within – Treatment design; Treatment of extra venous variables, Scaling Problems and Techniques:- Rating Scales, Rank-order Scales, etc, Determination of Scale Value.

**EDU 314: Comparative Education (2 C)**

Scope and meaning of education, examination of significant differences and similarities in education policy and practices in selected societies, problems of educational development in developing countries.

**EDU 335: Teaching Practice I (3 C)**

Students learn through practical experience how to teach particular subjects, manage a classroom and the functions of a good teacher.

**SED 305: – Practicum in Science Teaching (3C )**

Students are expected to carry out activities in their respective areas of specialisation as stated below.

**Agric Practicum**

Activities in Farm tools & Machinery, Methods in Farm Surveying, Management of Farm Animals, Construction of Egg candler &

candling, Soil and Soil experiments, Rocks & Rock Formation, Floriculture.

### **Biology Practicum**

Activities on Microscopy cell division, Construction of queraat, Ecosystem, Improvisation of necessary instrument in Biology e.g. Rain gauge, ACC paper wind vane etc. Activities on genetical principles, Construction of Herbarium, Staffing of Animals, Skeleton.

### **Physics Practicum**

Activities on Graphs & Data handling, Activity on measurement of Mass, Experiment on Mechanics, Experiments on light.

### **Chemistry Practicum**

Activities on separation Techniques, Preparation of standard solutions, Activities on volumetric Analysis, Qualitative analysis, Test for gases activities on Identification of rations.

### **Integrated Science Practicum**

Activities on Microscopy, Improvisation of an ecosystem, Activities on Energy transformation, Simple machines, Thermo dynamics, Test for gases, Separation techniques, Activities on Volumetric Analysis.

### **Mathematics Practicum**

Improvisation of Abacus Counters

Using improvised materials to teach shapes such as triangle, circle square etc.

Using simple games to teach elementary mathematics.

### **Information and Technology Practicum**

Activities on computer games, Improvising computer, Activities on computer virus.

**Note:** The activities for each of the sciences listed above will include post teaching practice discussion and remediation (EDU336).



**EDU 336: Post Teaching Practice Evaluation/Remediation (2C)**

The student is required to write a comprehensive report on his/her experiences in practical implementation of teaching/learning strategies in the classroom as applied to the subject area. The report should include:

- Challenges encountered during the teaching practice;
- The lesson notes used during the teaching practice;
- Assessment questions as well as the marking guides used;
- Assessment of teaching practice supervision by the supervisor, and
- Suggestions for improvement.

The report should be submitted by the student to the Dean through the Study Centre Director for:

- Evaluation,
- Feedback, and
- Remediation.

The result of the overall process should be communicated to the student from the Dean through the Study Centre Director.

**BIO 301: Genetics II (3 C)**

Aspects of human genetics pedigree analysis. Further consideration of various deviations for basic principles. Gene interaction. Pre-requisite – Bio 201 Mendelian, molecular and statistical basis of population, Hardy-Weinberg equilibrium and its genetic uses, ecological genetics and mode of selection causes of changes in gene and genotype frequencies.

**BIO 302: Field Course I (Practicum) (1 C)**

Sampling techniques in local habitats. Assessment by report.

**BIO 303: General Cytology (3 C)**

Light, phase contrast, dark-field and electron microscopy auto-radiography, florescent, cell cycle, introductory cytogenetic.

**BIO 304: General Ecology (3 C)**

The ecosystem approach to the study of ecology. Energy flow and nutrients cycling dynamics of populations and communities in ecosystem, influence of man. Pre-requisite BIO 202

**BIO 305: Molecular Biology (3 C)**

Biogenesis of micro tubules, microfilaments, and mitochondria. Membrane interaction. Introduction to bio-energetic and thermodynamics. Pre-requisite – BIO 205.

**BIO 306: General Physiology II (3 C)**

A general study of osmoregulation, excretion transport, homoeostasis and their co-ordination in animals. Plant water relation, growth and growth regulation. Physiological aspect of crop yield. Perquisite – BIO 203.

**BIO 308: Biogeography**

Distribution of world flora, floristic regions of the world and zoogeographic regions of the world, comparism of tropical and temperate flora, dispersal and colonisation of land by plants and animals, island biogeography, relationships between vegetation, soil types and climate, relationships between plants distribution and word faunas

**BIO 309: Introductory Nematology (2 C)**

Principal characteristics of nematodes, mapology, position and outlines of classification of nematodes. Morphology and Biology of important plant parasitic nematodes and their economic importance nematological techniques. General principles and method of controlling nematodes.

**BIO 308 Evolution (2 C)**

Current concepts in evolution; Geological periods and epochs. Genetics variation and speciation. Evolution of selected organisms.

**BIO 311: Mycology (2 Units)**

Classification, structure, life cycles and physiology of fungi, their economic importance

**BIO 314: Animal Behaviour (2 Units)**

History of ethology. Reflex and complex behaviour. Orientation and taxes. Fixed action patterns, releasers, motivation and driver. Displays, displacement activities and conflict behaviour. Learning communication and social behaviour. The social behaviour of primates. Hierarchical organisation. The physiology of behaviour. Habitat selection, homing and navigation. Courtship and parenthood. Biological clocks.

**BIO 318: Immunology and Immunochemistry (3 Units)**

Basic concepts of immunology, structure of antigenic determinants cellular response, genetics of response to antigenic stimulation. Structure and classification of immunoglobulin and antibodies. Mechanisms of antibody formation. Antigen-antibody interactions; role of lymphoid tissues and thymus in immuno-responses. Hypersensitivity, immunopathology, auto-pathology, auto immunology, tumor and transplantation immunology, immunoprophylaxis modern techniques in immunology and immunochemistry. Principles of Chemotherapy. History of chemotherapy. Basic pharmaco dynamics and pharmacokinetics. Chemotherapeutic agents: antibacterial, antifungal, antiviral antiprotozoan and anti helminths. Modes of action of antimicrobials. Chemotherapy of specific diseases. Drug bio-assays and sensitivity tests.

**BIO 411: Parasitology (2 Units)**

Principles of Parasitological and Zoo-economic effects. Introduction to parasitism history and evolution of parasitism, types of parasitism, host-parasite relationships. Parasitic protozoa, trematodes, cestodes, nematodes, acanthocephalans, leeches and arthropods.

**BIO 412: Wildlife Ecology and Conservation (3 Units)**

General principles of ecosystem management, wildlife disease, principles of wildlife management. Wildlife in Nigeria; conservation policies, problems and prospects. World wildlife resources and their protection.

**BIO 413 Developmental Biology (2 Units)**

Gametogenesis, fertilisation, morulla formation, invagination, organogenesis, and general embryology.

**EDU 421: Guidance and Counselling (2 C)**

Meaning, Purpose and Development of Guidance and Counselling, The services of a School Guidance programme; - The individual appraisal service. Information needed for the analysis of the individual, collection of information (test, inventories etc). Organising recording and filing information; Use of recorded information; Information service:- Vocational Education and Personal Social Information, Methods of obtaining and Disseminating information; The Counselling Service:- Nature, Purpose and Theories of Counselling; The Counsellor and the counselling process, The Placement Service in School and out-of School placement, follow up studies; Purposes of and procedures in follow-up studies, Problems in Guidance and counselling:- Values and attitude orientation, Guidance as Classroom or Specialist Centered, Guidance as Direction or Developments, Problems of Social change, Relation with other Personnel and Services:-Counsellor and School Administration, Relationship with teachers, Extra – School Relationship, Working with Parents and Making Referential, Guidance:- Organisation and Implementation, Preparation of Occupational, Information, Practicum; Preparing and using Cumulative records.

**EDU 412: Educational Management (2 C)**

Define educational administration, Educational law and the control of Education in Nigeria, The organisation of the Ministry of Education and the function of boards of education, the Nigerian Educational system, the school and the community, Bureaucracy and decision making in educational administration, human relations in Educational administration, Educational Leadership, the role of the principal, staff

personnel administration, supervision of instruction, Admission Procedures, Student's records and reports, Student's discipline and welfare, Student organisation and participation in School Administration, Principle of planning, School finance and accounting system, School routine and time table, The school plant and facilities, Examinations and the problems of academic standards, Evaluation and school inspection.

**EDU 423: Measurement and Evaluation (2 C)**

Definition and purpose of Measurement and Evaluation, Importance of Tests in Education; Validity of Tests in Educational Achievement; Functions of classroom tests, Criteria for effective testing, Problems of tests construction; Measurement of educational outcomes, Behavioral cognitive and non-cognitive of education, Pupils characteristics to be measured, Types of tests, Essay and objective type tests advantages and disadvantages of each, when to use each of them. Tests Administration and Scoring, Judging the Quality of a Classroom test, Estimating, Interpreting and improving reliability of test, Validity of Classroom Tests, Problem of Marking Tests, and Quality Control in Marking System.

**EDU 420: Research Project (4 C)**

An application of the research methods and data processing course to a field experience under the guidance of a selected facilitator.

**EDU 426: Special Education (2 C)**

Concept of special education, its definition and origins. Examination of the terms integration, inclusion, and individualised education programme within the context of special education. Giftedness, its meaning, and causes as well as case studies of the gifted. The education of gifted children. Hearing impairment and educational considerations for the deaf. Visual impairment, its causes and history. Educational considerations for visually impaired children.

**EDU 435: Teaching Practice II (3 C)**

A minimum of six weeks supervised exposure to classroom teaching on field experience to demonstrate the degree of proficiency in applying some of the basic theories of instruction.

**BIO 401: Population Genetics (3 C)**

An introductory consideration of mathematics models for the analysis of gene frequencies and genetic variation in populations.

**BIO 402: Cytogenetics of Plants (3 C)**

Aspect of cell and nuclear division morphology and behaviour of chromosomes observation and polypidy.

**BIO 403: Soil Ecology (3 C)**

Physical and chemical nature of soil. Setritus organism. Cycling of minerals and nutrient pools. Classification and characteristics of soils. Chemical component and analysis of soils and plant tissue. Plant, soil-water relationships.

**BIO 404: Systematic Biology (3 C)**

A bio-systematic approach to the classification of organisms and nomenclature.

**BIO 405: Developmental Biology (3 C)**

Molecular and genetic aspects of development. A detailed study of the cellular and multi-cellular bases of development.

**BIO 407: Hydrobiology (3 C)**

Types of aquatic habitat, ecological adaptations to aquatic life.

**4.11. Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA)**

**4. 11.1 Formula for Calculation of GPA and CGPA**

Performance of students in any semester is reported in Grade Point Average (GPA). This is the average of weighted grade points earned in the courses taken during the semester. The GPA is obtained by multiplying the grade in each course by the number of credit units assigned to that course, and then summing these up and dividing the sum by the total number of credit units taken for the semester.

The CGPA on the other hand is obtained by multiplying the total grade points obtained by the respective credit units for all the

semesters added together and then dividing the product by the total number of credit units for all the courses registered by a student.

#### 4.12. Class of Degree

Degrees for undergraduate programmes are classified into four levels as follows:

1. 1<sup>st</sup> Class Honours Degree with cumulative grade point average of 4.5 to 5 points.
2. 2<sup>nd</sup> Class Honours Upper Degree with cumulative grade point average of 3.50 to 4.49.
3. 2<sup>nd</sup> Class Degree (Lower Division) with cumulative grade point average of 2.40 to 3.49.
4. 3<sup>rd</sup> Class Degree with cumulative grade point average of 1.50 to 2.39.

The details of this information are provided in Table 16 below.

**Table 16 :Formula for Calculation of GPA and CGPA**

(i) Course Units	(ii) Percent age Scores	(iii) Letter Grade	(iv) Grade Points (GP)	(v) Grade Point Averag e (GPA)	(vi) Cumula tive Grade Point Average (CGPA)	(vii) Class of Degr ee	
Vary accordi ng to hours assigne d to each course per week per semest	70 – 100	A	5	Divided by multiply ing I and iv and divided by total credit units	4.50 – 5.00	1 <sup>st</sup> Class	
	60 – 69	B	4		3.50 – 4.49	2 <sup>nd</sup> Class Upper	
	50 – 59	C	3		2.40 – 3.49	2 <sup>nd</sup> Class Lower	
	45 – 49	D	2		1.50 – 2.39	3 <sup>rd</sup> Class	
	40 – 44	E	1				
	0 - 39	F	0				

er, and accordi ng to work load carried by student s						Class
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#### 4.13 Good Academic Standing

A student whose Cumulative Grade point Average (CGPA) at any semester is between 3.5 and 5.0 is a good student that should endeavour to keep it up in order to aspire to graduate with first class or second class upper degree of his/her programme.

A student whose CGPA is between 1.50 and 2.5 at the point of a particular year of study is a weak student who should buckle up to earn a good degree. At the end of a student's programme where he or she has exhausted all the courses without earning up to 1.5, such a student is assumed to have failed. This is not good enough considering the energy and resources put in place.

#### 4.14 End of Programme Clearance

Upon the release of the graduation list, graduating students are required to undergo a clearance process by doing the following:

1. Log into your portal, click on clearance form which is on the left hand side of the menu,
2. Print it out and fill in the necessary information required on the form, e.g Name, Matric Number, etc. (student data).  
Having done the above, you can return to the portal:
  1. Click on Study Centre to clear any issues regarding the centre. If there are none, get an official stamp for proof.
  2. Click on Library for clearance on books if still having school books in your possession. If there are none, an official stamp is required here for proof.



3. Click on Bursary; here is the final process for clearance on Alumni, project fees, IT, etc. This part will also be stamped by the school representative.
4. Having satisfied all the above, the student is ready for the graduation ceremony.

## **PART 5: ASSESSMENT AND EVALUATION**

### **5.0 Introduction**

To achieve the learning objectives of any course, it is mandatory that students are assessed during and at the end of the semester. This brings about the issue of examination and assessment. The assessment of students' progress is done through a combination of the following methods:

1. Tutor-marked Assignments (TMAs)
2. Written essay examinations or pen on paper (POP)
3. Computer-based or e-examinations
4. Individual projects
5. Seminar presentations
6. Field experience or practicum
7. Laboratory activities where applicable

### **5.1 Tutor- Marked Assignments (TMAs)**

The TMA is part of the evaluation mechanism where each course is provided with four (4) sets of twenty (20) questions each and the best three (3) are used as part of Continuous Assessment. The TMAs are objective questions. To qualify to sit for each examination and to be graded, each student is expected to write and turn in three (3) TMAs for each of the courses registered.

#### **5.1.1 Opening and Closing of the TMA Portal**

This is usually determined at each semester by the Directorate of Information and Communication Technology (DICT) based on the University's academic calendar.

## 5.2 End of Semester Examinations

### 5.2.1 The e-Examination

- Undergraduate 100 and 200 levels undergraduates write electronic examinations in the faculty.
- Lecturers are assigned to courses and generate test items course by course.
- The type of test items set by lecturers are a combination of multiple choice examinations, completion and true/false.
- One hundred and twenty (120) questions for a two unit course and one hundred and fifty (150) for a three unit course per course are to be generated by lecturers.
- After the generation of the items, lecturers upload and activate to MIS or ICT required electronic platform.
- E-Examinations are conducted at designated venues study centre by study centre.
- ICT or MIS directorates make the questions available to students according to the time table released for e-examination.
- Students take the examination and scores are returned to them through their portals.

### 5.2.2 Pen-on-Paper (POP) Examination

- Undergraduate 300, 400 levels and post graduate students write pen-on-paper (essay) examinations in the faculty.
- Lecturers are assigned to courses and generate test items course by course.
- The types of test items set by lecturers are essay in nature.
- For a two unit course, five (5) essay questions are generated out which students are made to answer four (4) while for a three unit course, six questions are generated out which four (4) would be answered.
- POP examinations are conducted at designated venues study centre by study centre.
- Students are made to write the examinations according to POP examination time table scheduled by Directorate of Examinations and Assessment (DEA).

- The students' examination scripts are marked at six marking centres at each geopolitical zone through conference marking.
- Qualified examiners (with Ph. D ) are recruited at each centre for marking at the centre.
- Subject Officers for the faculty at each marking centre undertake the vetting of marked scripts to ascertain the quality of scoring.
- Examination scores are uploaded to MIS platform for further processing and transfer to students' portals after ratification by the faculty, UEC and University Senate.

### **5.2.3 Opening and Closing of the Examination Portal**

Opening and closing of the examination portal shall be done according to the academic calendar released by the University Management.

## **5.3 Examination Procedures**

Examination constitutes a very important aspect of the University activities and the University states categorically that the conduct of its examination is taken seriously. The University does not condone any form of examination misconduct.

### **5.3.1 Policies**

As given by the University Management through the Directorate of Examinations and Assessments (DEA).

## **PART 6: SUPPORT SERVICES**

### **6.0 Introduction**

As a student of NOUN, one of the departments you might be meeting for the first time is the Learner Support Services. Learner support is not well known or used at all in conventional universities. Where it is used at all, it is limited to handling personal difficulties too great for a student to handle on his or her own. It thus focuses on the exceptional needs of a minority of students. In Open and Distance Learning however, Learner support focuses on meeting the needs of all learners; the needs could be as diverse as the student body itself. Meeting such needs is central to high quality learning just as it is essential for effective provision of ODL. Some of such needs include but not limited to helping you know what is on offer, i.e. guidance about choice of courses, easing registration procedures, preparatory diagnosis, study skills, adjustment needs, access to group learning in seminars, tutorials, how to complete your chosen courses for the semester, how to work on your assignment, how to contact other students and organise group study with them, helping you sharpen your participation in a course, etc.

Learner Support Services identifies you as an individual student thus you are not lost in the market. Learner Support interacts with you constantly, thus your “whereabouts” in the academic community is easily known and Learner Support spends quality time with you thus helping you appreciate yourself, your worth and helping to make you re-discover yourself. For you therefore, Learner Support plays a support role and provides supportive people; it gives you support structures and a supportive environment, it serves as an intermediary between you and the institution since we in Learner Support understand your “language” as well as the “language” of the institution; and through Learner Support, you can make use of institutional provisions. Staffs of the Learner Support Services, particularly the Student Counsellors, respond to your needs appropriately, relate to you as individuals with unique interests, interact with you to know how you feel, fare and function, help to chart quality route for you as you progress in your studies thus acting as your quality agents, serving as your academic maintenance

engineers and your systems builders . More than anything else, Learner Support helps you to build bridges, linking you with people, events, situations, ideas and activities that will enhance learning.

## **6.1 Study Centres**

As explained above, an extensive and comprehensive learner support system has been established at NOUN and administered through the Directorate of Learner Support Services. The main venues where student support services take place are the Study Centres which are distributed all over the country.

The Human Resource of Learner Support Services include study centre directors, administrative officers, multimedia personnel, account staffs and store officers.

The highly qualified and experienced guidance counsellors are available for you to contact them from time to time with respect to several aspects of your studies including enrolment, choice of programmes and courses, when and how to study and when to seek special clinic for academic guidance. Their support service should also provide early warning signals in relation to difficulty with studies in order for you to take prompt remedial action if there is need for such.

The facilitators deal exclusively with academic issues. The course materials which have been developed in sequence using conceptual or modular themes are the main teaching instruments. The themes have been broken down to sections and the sections broken down into units. The main function of the facilitators is therefore to solely bring to your understanding some grey areas in these course materials.

The multimedia approach is the preferred method of delivery. This approach, apart from the print materials which you will read on your own, may consist of audio visual programmes, CD-ROMs, video tapes, audio tapes, assignments, counselling sessions and where necessary, practical work. For now however, the main course material is the print version. Once you have registered the prescribed courses

of your choice, you will be provided with these print materials and you proceed straight to study them.

Printed materials, audiotapes, video tapes and CD-ROMs will be offered as complimentary media based on availability and your preference. You will also be able to learn from a distance through television and radio broadcasts of our educational programmes, when they are aired.

## **6.2 Facilitation**

Due to a variety of reasons, which include lack of qualified personnel, few subscriptions in some courses, a scheme for sharing and of using few facilitators for programmes may be practiced within a quality assurance framework. All students are encouraged to attend face-to-face contact sessions. The duration of the contact session will be determined by the nature of the courses. In some courses such as those requiring laboratory classes, participation at the contact session shall be mandatory. This would enable the lecturers to conduct intensive reviews, simulation, critiques, students' questioning and some lectures on course contents they had worked on for the year.

### **6.2.1 Introduction to iLearn platform**

**NOUN iLEARN** is a new and exciting e-learning solution created to transform and empower National Open University of Nigeria to truly deliver impactful education to all types of students, lead the transformation of education and become the face of technology-based education in Africa. This platform has been created to provide an avenue for teachers and knowledge bearers who are passionate about education to disseminate and share that knowledge across a wide spectrum of learners in ways that are convenient and seamless.

NOUN iLEARN was born from a passion for education, growth, change and technology. This platform has changed the way students learn, the way facilitators share the knowledge that they have and the entire viewpoint of the National Open University of Nigeria. With this platform, facilitators have been empowered to truly share their vision, thoughts, experience and knowledge with an unlimited number of learners across various geographies.

One of the core principles of NOUN iLEARN is to support students to gain in-depth understanding of the subject matter being studied per time. Interaction plays a key role in learning; understanding of course learning content is deepened by the cross interaction between students and facilitators. The NOUN iLEARN platform replicates the traditional classroom interaction experience using technology. It provides for faculty-led discussions, managed questioning and course-centred discussions which are open and could be initiated by students.

### **6.2.2 Tutorial Support**

We give tutorial support through online facilitation, group discussions, chat rooms, and forums.

### **6.3 Library Services**

The NOUN Library is a place where you will find each course material, set of books, audio-visual materials, and journals etc. The NOUN Library will be opened to students and can be accessed from any location with an internet connection. Libraries at study centres will also be found helpful to students. Any book or material borrowed from the library should be returned at the designated time for easy flow of materials. However, the NOUN authority will punish any student who attempts to remove or removes library materials. Students shall be responsible for any damage to library books or materials being used by them

### **6.4 Information Communication Technology**

The Information and Communication Technology (ICT) Department of the University is a unit that demonstrates the dependence of the University on IT. It is the arrow head of the electronic and networking activities of the University. It is positioned primarily to make the University achieve in its mode of learning, Distance and Learning. Its main duty is to see to the internet connectivity and networking technology that enhances the functionality of the University in terms of admission and examination processes and various payments done by the learners. When issues arise in these areas, the ICT staffs are readily on ground to resolve such.



#### **6.4.1 Channels of Communication**

- Correspondence with facilitators via letters or e-mail, SMS
- Telephone discussions with facilitators
- Newsletters and the news bulletin
- NOUN website

## **PART 7: STUDENTS' ISSUES**

### **7.0 Introduction**

One of the features that characterise an open university is the openness with which it conducts its academic activities and provides information relating to these activities. Due to some peculiarities of students' profile in an open university in terms of age and socio-economic factors, the nature of the students and the profile interaction with the Open University assumes a different meaning unknown to the conventional university system. The students' profile ensures that students' needs are not only varied, they are multidimensional whilst being specific to the particular student.

Communication between teachers and learners is seen as a necessary component in distance education as in all other forms of education. Open learning systems on the other hand are often heavily based on self-study. The importance attached to student-teacher interaction may vary considerably between different systems, and has been closely linked to educational strategies such as the open learning system in NOUN. Interaction among learners is another crucial component. Learner-learner interaction is encouraged at NOUN.

Often, students meet physically in groups sometimes connected with other forms of local support. Some technologies allow the organisation of "virtual groups", where the students may interact at a distance, as for example by computer-mediated communication.

Learner Support Services delivered locally is a common component of ODL and NOUN. NOUN provides this service at specially designated locations called learning/study centres. This support is in a form that allows some kind of direct interaction between the learner and a teacher or a mentor/facilitator. This component may be organised completely as face-to-face events, or in combination with communication at a distance such as teleconferences. The centre may also offer access to other learning resources and equipment.

## **7.1 Code of Conduct**

### **7.2 Students' Complaints**

The Visitors Information and Call Centre (VICC) is a specialised unit of the University that provides ready answers to all types of enquiries presented by visitors and prospective students. It serves as a link between the University and the general public. The activities of the unit are carried out through face-to-face interaction at the front desk; directing visitors, addressing and treating complaints and challenges faced by students and directing them to relevant schools and units for prompt resolution and response. Additionally, the unit reads all email enquiries addressed to the University via [centralinfonoun.edu.ng](mailto:centralinfonoun.edu.ng) and provides accurate information programmes offered by NOUN to prospective students. Such enquiries and corresponding resolutions are communicated to the University.

The University offers learner support services through the study centre administrators and counsellors. The mainstay of every ODL institution is, to a large extent, the adequate and good provision of learner support services.

### **7.3 Service Charter**

The University has set up a SERIVCOM unit. The SERVICOM, Service Compact with ALL Nigerians is a comprehensive plan of action for the running and sustaining of a public service agency with which it (the University) can be assessed. In setting up this unit, the University is interested in democratising the entire process of running its various operational activities such that her major clients – the students, public and stakeholders for whom these services are provided – are given some measure of control over the quality of services being delivered/received.

Intrinsic in the Charter of service, is the right of citizens of the country to seek redress when any of the services as contained in the SERVICOM Charter fails to meet their expectation. If such a situation should arise, the University has provided avenues for redress for any dissatisfied student and or stakeholder to do any of the following:

- Petition the Study Centre Director
- Petition the Dean/Director of the academic unit concerned
- Petition the Registrar
- Petition the University Senate
- Petition the Vice Chancellor
- Petition the Council
- Petition the Honourable Minister of Education; and/or
- Seek redress at the law court

See Appendix 1 –for the Service Charter of the University.

## **7.4 Glossary of Terms**

### **Core/Compulsory Course**

A compulsory course is a course which a student is required to register for and pass before eligibility for graduation.

### **Elective Course**

An elective course may be registered and taken but not necessarily passed.

### **Pre-Requisite Course**

This is a course at a level of study, which must be passed before registering for another prescribed course.

### **Course Credit Unit System**

This is a system of organisation of the curriculum in which courses are broken down into units and are examinable and for which students earn credit(s) if passed. The courses are assigned weights; e.g. three credit units means three hours of lectures per week which include practicals.

## APPENDICES

### Appendix 1: Staff List for the Faculty of Education Academic Staff

S/N	NAME	SEX	DESIGNATION	SPECIALIZATION		E-MAIL ADDRESSES
				Field	Qualifications	
1	Prof. <b>OSUJI</b> Uchenna Sydney A.	M	Professor/ DEAN	Measurement & Evaluation	NCE (Tech) Int, Enugu  B. Ed (UNICAL) ACPDI (UK)  M. Ed (ABSU) PGDDE (IGNOU), Ph.D M & E (2000), Abia State Uni.	<a href="mailto:osujiojiugwo2006@yahoo.com">osujiojiugwo2006@yahoo.com</a> , <a href="mailto:uosuji@noun.edu.ng">uosuji@noun.edu.ng</a>
2	Prof. <b>OKONKWO</b> Charity A.	F	Professor	(1) Measurement & Evaluation (2) Physics	N.C.E., Maths/Physics (IMT ENUGU), B.Sc. (Ed) Physics, (UNICAL), M. Sc (Physics) Lagos, M.Ed. Measurement & Evaluation, (ABSU), Certificate in Computer Programming, (UNIPOINT), Ph.D M & E (2004), Abia State Uni.	<a href="mailto:caeokonkwo@yahoo.co.uk">caeokonkwo@yahoo.co.uk</a> , <a href="mailto:cokonkwo@noun.edu.ng">cokonkwo@noun.edu.ng</a>
3	Prof. <b>EYA</b> E. Patrick	M	Professor	Curriculum Studies	B. Ed. Edu. Geography & Botany (1979), M.Ed. (1982), Ph.D Curriculum Studies (1995), Uni of Calabar	<a href="mailto:peya@noun.edu.ng">peya@noun.edu.ng</a>
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4	Dr. <b>MANAFA</b> Fausta	F	Lecturer II	Soc. of Edu.	NCE Eng/CRS (1990), B.A. (Ed) Lang. Arts Eng. Edu. (2000), M.Ed Sociology of Edu (2010), Ph.D Sociology of Edu (2015), Uni. Of Lagos	fausymanafa@yahoo.com
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4	Dr. <b>Aina Shola</b>	M	Lecturer II			

4	Mrs. <b>KELIKUME</b> Genevieve	F	Assist. Lecturer	Human Res. Mgt.	NCE Maths (1987), B.Ed Adult Education/Econs (1994), M.Sc Economics (1998), M.Ed Educational Management (2008), Ph.D (In View) Walden Uni, Baltimore, USA	<a href="mailto:genevievek&lt;br/&gt;elikume@y&lt;br/&gt;ahoo.com">genevievek elikume@y ahoo.com</a> ,
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	Hakeem Olaniyi				Education; B.Sc. (Ed) Business Education; M.Ed. Business Education, Ph.d (In View, Uni. Of Benin	<a href="mailto:yahoo.com">yahoo.com,</a>
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**DEPARTMENT OF SCIENCE EDUCATION**

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					Education (U.I.) (2001) Ph.D Maths Edu (2010), Uni. Of Ibadan	
.	Dr. <b>ADAKOLE</b> Ikpe	M	Senior Lecturer	Science Education	B.Ed Sci. Edu, M.Ed Science Education, Ph.D Sci. Edu (2014), Ahmadu Bello Uni Zaria	aikpe@noun.e
.	Dr. <b>ANAEKWE</b> Marcellinus Chibueze	M	Senior Lecturer	Science Education	NCE Bio/Chem (1984), B.Sc. Edu/Chem (1988), M.Ed. Sci. Edu/Chem. (1992), Ph.D Sci. Edu. (1997) UNN	<a href="mailto:marsanaekwe@noun.edu.ng">marsanaekwe@noun.edu.ng</a> , <a href="http://marsanaekweil.com">marsanaekweil.com</a> , <a href="mailto:manaekwe@noun.edu.ng">manaekwe@noun.edu.ng</a>
.	Dr. <b>ANGBA</b> Tessy Onogimesike	F	Senior Lecturer	Exercise Physiology	B.Ed Phy. & Health Sciences, M.Ed Physiology, Ph.D Exercise Physiology (2011), Uni. Of Ibadan	tangba@noun.edu.ng
.	Dr. <b>AFOLABI</b> Moriliat Jumoke	F	Lecturer I	Sci. Edu.	NCE Phy/Chem Edu (1981), B.Sc. (Ed.) Chem (1988), M.Ed.	<a href="mailto:jumafolabi@noun.edu.ng">jumafolabi@noun.edu.ng</a>

					Curriculum in Sci. Edu (2004), PhD Sci. Edu. (2015) – ABU, Zaira	
.	Mr. <b>AMUSA</b> Oluwadamilare J.	F	Lecturer I	Physics Education	B.Sc. (Ed) Edu. & Physics (1997), M.Ed Physics (2005), Ph.D Physics Edu – In view (Unilag)	amusadamilar hoo.com
.	Dr. <b>OGUNDIWIN</b> Oluyemi A.	M	Lecturer II	Bio Edu	B.Sc. Agronomy (1992), PGDE (2003), M.Ed Biology Edu (2006), Ph.D Biology Edu (2013), Uni of Ibadan	<a href="mailto:yemiogundiwin@hoo.com">yemiogundiwin@hoo.com</a> oogundiwin@edu.ng
.	Dr. (Mrs.) <b>OLUSA</b> Olayinka Leah	F	Lecturer II	Edu Bio	BSC Sci Edu (1990), M.Ed Sci Edu (2001), Ph.D Sci & Tech Edu (2015), Adekunle Ajasin Uni, Ondo,	<a href="mailto:oluleah@yahoo.com">oluleah@yahoo.com</a> oluleah@gmail.com
.	Mr. <b>EJEMBI</b> Enokela John	M	Asst. Lecturer	Agric Sci. Edu	NCE Agric Education; B.Sc. Ed. (Hons) Agric Science Education,	<a href="mailto:jejembi@noun.gov.ng">jejembi@noun.gov.ng</a> , <a href="http://jackejembi24.com">jackejembi24.com</a>

					M.Ed. Sci Edu	
.	Mrs. <b>OLAWALE</b> Yetunde Mutiat	F	Asst. Lecturer	Sci.Edu.	NCE Int. Sci (2003), Fed. Coll. Of Edu, B.Sc. Biology Edu. (2010) Uni Abuja, M.Sc. (Ed) Biology (2017), NOUN	<a href="mailto:olawaleyeturunde@yahoo.com">olawaleyeturunde@yahoo.com</a> , yolawale@noun.edu.ng

### REGISTRY STAFF

S/N	Name of Staff	Qualification and Dates Obtained	Rank/Designation, Salary Scale and Date of First Appointment	Post Qualification Work Experience	Faculty / Unit
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1	Mrs. Dayo Akinbowale	M.Ed Educ Admin (2009), PGDE (2004)  B.Sc. (Hons) Pol. Sci. (1989), Dip in Data Processing (1993)	Deputy Registrar, 2017	National Open University of Nigeria  2003 to Date	FOE
2	Mrs. Kikelomo Adesina-Adewale	B.A. English, PGDDE, MBA	Principal Assistant Registrar	National Open University of Nigeria  2003 to Date	FOE
3	Mrs. Deborah Weyinmi Akinboboye	M.Ed. Admin & Planning (2016), PGDE (2009), HND Bilingual Sec Studies (2004), OND Sec. Studies (2000)	Principal Confidential Secretary I	National Open University of Nigeria  2003 to Date	FOE
4	Mrs. Jane A Ukaigwe	OND Computer Sci, B.Sc Computer/Stat, M.Sc Information Tech.	Principal Confidential Secretary II	National Open University of Nigeria  2004 to Date	FOE

5	Mrs. Augustina O. Afolabi		Principal Confidential Secretary II	National Open University of Nigeria	FOE
6	Mrs. Arowosegbe Oluwafisayo O	B.Sc Pol. Sci (1992), PGDE (2004), B.Ed Educ Admin (2012)	Admin Officer 1	National Open University of Nigeria	FOE
7	Ugochi Onyeneri .N	B.Sc. Govt/ Public Admin (2007) M.BA Human Resources & Management	Admin Officer 1	National Open University of Nigeria	FOE
	Mr. Favour Ikhana		Admin Officer	National Open University of Nigeria	FOE
	Mrs. Temitope O. Oyenuga	OND (Accounting) B.Sc (Accounting) in view	Senior Sec. Asst. I	National Open University of Nigeria	FOE
8	Ms. Temitope Adisa	OND - 2003 WAEC - 1998	Senior Clerical Officer. 22 <sup>nd</sup> June, 2011	National Open University of Nigeria (NOUN) – 2011 to Date	FOE

9	Victoria Akunwa Okere	HND Accounting (2017)	Senior Clerical Officer. 26 <sup>th</sup> Nov, 2012	National Open University of Nigeria (NOUN) – 2012 to Date	FOE
10	Mrs. Esther Durotoye	WAEC – 1999 B. Sc. 2012	Clerical Officer 17 <sup>th</sup> December, 2012	National Open University of Nigeria (NOUN) – 2012 till Date	FOE FOE
11	Mr. Chinonso F. Uzundu	WAEC	Environmental Attendant	National Open University of Nigeria	FOE
12	Mrs. Esther Orji	WAEC	Environmental Attendant	National Open University of Nigeria	FOE



**List of other Staff from other Faculties Serving the Faculty of Education**

S/N	Name	Qualifications	Discipline	Designation
1	Prof. Vincent Tenebe	B.Sc., M.Sc., Ph.D	Agronomy	Professor
2	Prof. Grace Jokthan	Ph.D Animal Science (2006), M.Sc. Animal Science (2001), B.Sc. Agricultural 1990	Agricultural Ext. Mgt	Professor
3	Prof. MoniOlwa Olaniyi	Ph.D Applied Biological Sciences (2003), M.Sc. Agricultural Biology (1991), M.Sc. NEM	Biology	Professor
4	Prof. Nda Mundi	Ph.D Agric extension and Rural Sociology (2007), Msc Agric extension (1991), B.sc (Ed) Agricultural science (1984), N.C.E Agricultural science (1981)	Agricultural Ext. Mgt	Professor
5	Prof Eyisi Joy	N.C.E Eng/Religious Studies, B.A Education English, M.A Educational Admin & Supervision, M.A English, Ph.D English	English	Professor
6	Prof. Anayo D. Nkamnebe	Ph.D Marketing (Nsukka) (2004); MBA Marketing (Nsukka) (1996),	Marketing	Professor

		PGD; B.Sc Marketing (Nsukka) (1993). Specialised in Ph.D Marketing (Nsukka) 2004; MBA Marketing (Nsukka) (1996), PGD; B.Sc Marketing (Nsukka) (1993).		
7	Prof. Joseph O. Onwe	Ph.D Economics (University of Wisconsin-Milwaukee) (1986); M.Sc. Environmental Arts and Sciences (University of Wisconsin-Green Bay) (1980); B.Sc Business Administration (University of Wisconsin-Green bay) (1978). Specialised in Economic Growth and Development; and Urban Economics	Economics	Professor
8	Prof. Nkiruka T. Meludu	Agric Extension B.Sc Home Econs (1990) (Ekpoma), M.Sc Agric Extension (1992) (UI), Ph.D Agric Extension (1997), (UI)	Agric Extension	Professor

9	Prof. Wilfred Iyiegbuniwe	Ph.D Finance (U.S.A) 1984, M.Sc. Finance (USA)(1983); M.Sc. Decision Science. Applied Stat.(USA) (1982),Diploma in Marketing (Institute of Marketing-London) (1976), MBA(UNILAG) (1975), B.Sc. Business Admin (UNILAG) (1973). Speicalised in Marketing; Member, Chartered Institute of Marketing, Britain; Member, Nigerian Academy of Mgt; Member, Financial Mgt Association, USA; Member, Southern Finance Association, USA	Finance	Professor
10	Prof. Nkiruka Meludu	B.Sc. Home Econs (1990), M.Sc. Agric Extension (1992), Ph.D Agric Extension (1997) UI.	Agriculture	Professor
11	Dr. Saheed Oluwatoyin. Ajibola	Ph.D (Federal University of Tech, Akure) (2009); M.Sc. Applied Mathematics (University of Ilorin) (1998); B.Sc. Pure and Applied Mathematics (LASU)	Applied Mathematics	Associate Professor

		1994; WASC, (1986). Specialised in Applied Mathematics. Member, Nigerian Mathematical Society; Member, Mathematical Association of Nigeria; Member, National Association of Mathematical Physcs.		
12	Dr (Mrs.) Fagbemi O. Ayodele	Ph.D Business Administration (UNILAG) 1990; MBA (UNILAG) (1974); B.Sc. (Hons) Geography and Economics (Ile-Ife) (1972); GCE (1967). Specialised in Management. Member, Institute of Personnel Mgt Nigeria; Member of African Association of Public Admin and Mgt; Member, Nigerian Institute of Training Development; Member, Institute of Mgt Consultants, Nigeria.	Business Administration	Associate Professor
13	Dr Clement I. Okeke	B.Sc Bus Admin (University of Benin) 1983; MBA	Business Administration	Associate Professor

		Marketing (University of Nigeria, Enugu Campus)(1985); Ph.D Marketing (Abia State University, Uturu) (2009). Specialised in marketing. Member, National Institute of marketing of Nigeria, CMD Accredited Management Trainer; Member, academy of Management of Nigeria.		
14	Prof. Ofulue Christine	B.A Linguistics (1984, UNILORIN), M.A Linguistics (UI 1986), Ph.D. (Indiana), PGDDE.	Linguistics	Associate Professor
15	Dr. Omolara Daniel	B.Ed. English/Language Arts(1991), MA English (1998), Ph.D. English (2008)	English	Associate Professor
16	Prof. Samaila Mande	Grade II Teacher's Certificate (1990); Graduate Diploma in Public Relations (BEEC, Lagos) (1994); PGD in Business Admin-Marketing (Nsukka) (1997); M.Sc. Marketing (Nsukka) (1998); MBA	Management	Associate Professor

		<p>Marketing (Nsukka) (2000); M.Sc. Mass Communication (Benue State University, Makurdi) (2004); Ph.D Business Admin-Marketing (Igbinedion University, Okada) (2009). Specialised in Marketing.</p> <p>Member, Nigerian academy of Mgt.; Member, Institute of Management Consultants of Nigeria; Member, Nigeria institute of Public Relations; Member, African Council for Communication Education; Member, Nigeria Union of Journalist.</p>		
17	Dr. S.B. Osoba	<p>Ph.D Transport Geography (UI) (2010); MBA Management (OlabisiOnabanjo University, Ago-Iwoye (2004); M.Sc. Transport Studies (Ogun State University, Ago-Iwoye) (1998); B.Sc. Geography and</p>	Transport Geography	Associate Professor

		Regional Planning (Ogun State University, Ago-Iwoye) (1997); WASC, (1986). Specialised in Transport Geography. Member, Association of Nigeria Geographer; Chatered Member Institute of Logistic and Transport.		
18	Dr Adesina-Uthman Ganiyat A	Ph.D (Financial economics, U.P.M, Malaysia) (2011); M.Sc. Finance (IIUM, Malaysia) 2005; ACMA (2005); H.N.D. Banking and Finance (Fed. Poly, Ede, Nigeria) (1998).Specialised in Financial Economics.	Financial Economics	Associate Professor
19	Dr. Onyeka Iwuchukwu	B.A English, M.A English (Lagos), Ph.D. English. Specialised in Literature	Literature	Senior Lecturer
20	Dr. Anthonia Yakubu	B.A English (1991), M.A English (1995), Ph.D. English (2010). Literature	English	Senior Lecturer
21	Dr. T.O. Ishola	Business Administration TTC Akoka (2006), B.Sc. Business	Business Administration	Senior Lecturer

		Administration ABU, Zaria (1991), MBA (Marketing) ABU (1998)		
22	Theodore Iyere	BA Linguistics (1987, Jos), PGDE (1997), MA English Language (2002, ABU)	Linguistics	Lecturer I
23	Dr. Petu Ibikunle Michael	Ph.D Agronomy (2010), M.Sc. Crop Physiology and Production (1999), B.Sc. Agriculture (Crop Production) (1991)	Agricultural Ext. Mgt	Lecturer I
24	Dr. Okpara Atuma	Ph.D Management (University of Port Harcourt) (2013); M.Sc. Management (Lagos State University) (2008); MBA Management (Rivers State University of Science and Tech) (2004); B.Sc. Accountancy (Rivers State University of Science and Tech) (1997). Diploma in Computer (River State Professional Computer Studies. Specialised in Management. Associate Member, Nigeria institute of	Management	Lecturer 1



		Management; Associate Member, Chartered Institute of Administration.		
25	Dr. Ibrahim D. Idrisu	Ph.D Transport Mgt (St Clements University) (2005); MTM Transport- Aviation (Lodoke Akintola University (2002); MBA Finance (UNILAG) (1990); B.Sc. Finance (UNILAG) (1979); OND Accounting (Federal Polytechnic, Auch) (1974). Specilised in Management. Associate Member, Nigeria Institute of Mgt;	Transport Management	Lecturer 1
26	Dr (Mrs.) Ofe Iwiyisi Inua	Ph.D Accounting (UNIBEN) 2013; PGDE (UNIBEN) 2007; M.Sc. Accounting (UNIBEN) 2006; B.Sc. Accounting (UNIBEN) 2002; SSCE, (996) Specialised in Accounting. Member, Teachers Registration Council of Nigeria	Accounting	Senior Lecturer

27	Dr. Elizabeth Sabo	Ph.D Agric Extension, M.Sc. Agriculture Extension (2004), B.Sc. Agricultural Economics and Extension (1999)	Agricultural Ext. Mgt	Lecturer I
28	Dr. Onwodi Gregory	M.Sc Information Technology (2004), B.Sc Computer Science 1995; Ph.D Information Technology (2004), B.Sc Computer Science	Information Technology	Lecturer I
29	Ms. Vivian Nwaocha	M.Sc Computer Science (2006), PGD Computer Science and Engineering (2002), B.Eng Metallurgical and Material Engineering (1995)	Information Technology	Lecturer I
30	Ms. Afolorunsho Adenrele	Ph.D in view, B.Sc Computer science/Mathematics (1995), M.Sc Computer science (2006)	Information Technology	Lecturer 1
31	Mr. Adams Abiodun Emmanuel	B.Sc. Agric Biology, M.Sc.	Agric. Economics	Lecturer 1
32	Ms. Jubril Lucy Jummai	Dip in Lang Edu(French), B.A (Hons) UNIMAID, MTL( Lagos), PGDE(Indira	French	Lecturer 1

		GhandiUniv, French Literature		
33	Mr. Awolumat e Samuel	B. Sc (Agricultural Economics & Rural Sociology), M. Sc	Fisheries & Aquaculture	Lecturer I
34	Dr. Oyebanji Omotayo	B.Sc Computer Science (1976), M.Sc Computer Science (1981), Ph.D Computer Science (1984)	Computer Science	Lecturer I
35	Engr. Oguntala George Adeyinka	M.Sc System Engineering (2010), MBA Human Resources Management (2010), MCP Microsoft Certified Professional (2005), CCNA Cisco Certified Network Associate (2005), B.Sc Electronics/Computer Engineering (2008)	Information Technology	Lecturer II
36	Mr. Oluwasogo Okunade	Ph.D in view, M.Sc (2009), Microsoft Technology Associate, Data base Administration (MTA) 2011, B.Sc (2004), OND (2000)	Information Technology	Lecturer II

37	Dr. Maureen Chukwu	PhD Cell Biology and Genetics (1995-2010), B.Sc Biology (1990). Technical Teachers Certificate (2011), Diploma in Computer Science (1996)	Biology	Lecturer II
38	Dr. Uduak Aletan	Ph.D Nutritional Biochemistry (2010), M.Sc Nutritional Biochemistry 2001, B.Sc Nutritional Biochemistry (1997)	Chemistry	Lecturer II
39	Dr. Ogoko Emeka C.	Ph.D Analytical Chemistry (2010), M.Sc Analytical Chemistry (2001), B.Sc Chemistry 1996, Afrihup Professional Computer Certificate(2010)	Chemistry	Lecturer II
40	Dr. Kelle Henrietta Ijeoma	Ph.D Environmental Chemistry (2012), M.Sc Pure and Industrial Chemistry (2005), B.Sc Industrial Chemistry (1995)	Chemistry	Lecturer II
41	Mr. Osho Babatunde	Ph.D in View, MBA Finance 2001. M.Sc Statistics (1988), B.Sc Education Mathematics (1987), N.C.E Maths/Chemistry	Mathematics	Lecturer II

42	Mrs. Ishola Yemisi	M.Sc Mathematics (2008), B.Sc Education Mathematics (1992), N.C.E 1989	Mathematics	Lecturer II
43	Mr.Jamiu O. Amusa	B.Sc (Ed.) Physics 1998 (UNILORIN), M.Ed Physics Education 2004 (UNILAG)	Physics	Lecturer 11
44	Miss Nora Ijeoma Onwumelu	B.A English (1998)(UNILAG) M.A English Literature (2002) UNILAG	English	Assistant Lecturer
45	Dr.Abayomi Samuel Bankole	Doctor of Veterinary Medicine (DVM)2005	Agricultural Ext. Mgt	Assistant Lecturer
46	Miss Ajayi Folasade Abiose	Ph.D Biochemistry in view, Msc Biochemistry(2011), B.sc Biochemistry (2008)	Chemistry	Assistant Lecturer
47	Miss Odunmbaku Adiat	M.Sc Analytic Chemistry (2005), B.sc Chemistry (2002),HND Accounting (2001), Technical Teachers (TTC)(2006)	Chemistry	Assistant Lecturer
48	Mr. Disu Babatunde Akeem	Ph.D Applied Mathematics in view ,Msc Applied Mathematic (2010),B.sc Mathematic (2006)	Mathematics	Assistant Lecturer

49	Mr. Peters Adaranijo	Msc Digital Communication (2012), B.Eng. Electrical Engineering (2009)	Information Technology	Assistant Lecturer
50	Mr. Eya Nnabuike	Msc Networks and Communication , B.sc Computer science (2007)	Information Technology	Assistant Lecturer
51	Mr. Efiong A. Ibanga	B.Sc; M.Sc. (Physics)	Space Weather/Wave Propagation	Assistant Lecturer
52	Mr. Olawale B. Epebinu	B.Sc; M.Sc (Medical Physics)	Medical Instrumentation	Assistant Lecturer
53	Mr.Layiwo la Sanusi Shittu	B.A (Ife), M.A (Ibadan), PGDE (Ilorin),M.Phil (France) French &Francophone Literature, Teaching of French as a Foreign Language	French	Assistant Lecturer
54	Mr Iorvaa P SAI	B.B. French (Jos), Cert French (Besancon) M.A French, M.Sc French (BSU)	French	Assistant Lecturer
55	Mr. Chobel Abdul	B.Sc Software Engineering (2010), M.Sc Mgt Information Systems (2011), Graduate Employment Training (2012), Micro Sun Java	Software Engineer	Assistant Lecturer

		(2008)		
56	Mr. Anthony I. Ehiagwina	M.Sc Accounting (UNIBEN) (2008); B.Sc. Accounting (UNIBEN) (2002); Diploma in Accounting (UNIBEN) (1998). Specialised in Accounting.	Accounting	Assistant Lecturer
57	Mr. Osabiya Babatunde Joseph	Political Science B.Sc Pol Science (2006), (UNILAG), MPA (2010) UNILAG	Political Science	Assistant Lecturer

Appendix 2: Service Charter for the University

S/N	Type of Service	Customer	Delivery Target	Redresses available Customer	Official(s) responsible for Handling Complaints	Implementation Strategy
1	Proficiency Certificate Certificate Diploma 1st Degree Master Degree Postgraduate Degree PhD	Students	1 day 3 months  3 months to 1 year full-time, 2 year flexible mode  2 years full-time flexible mode 4 years  4 years full-time, 8 years flexible mode  1 ½ year full-time, 2 to 3 years flexible mode  1 year full-time, 2 to 3 years flexible mode  4 years full-time, 8 years flexible mode	Petition to the  • Centre Director • Dean/Director • University Senate • Vice-Chancellor • University Council • See redress at the Law Court	  • Study Centre Director • Dean/Director • Chairman of Senate • The Vice-Chancellor • Chairman of University Council • The Law Court	As stated in previous items heading
2	Enquiries Telephone E-mail Correspondences	Students/ Public Students/ Public Students/ Public	Within 1 day 3 working day 14 working day	Petition the Head, Media and Information	• Call Centre Supervisor • Registrar	By making sure that all phones are working and manned between the hours 08 8.00am-4.00pm
3	Sale of Admission Forms	Intending Students	Within 30 working days	Petition the Head, Media and Information	• Registrar	Matching Student qualification with admission criteria
4	Admission Processes	Intending Students Public	Within 8 wks of conclusion of sale of forms	Petition to • Academic • Registrar • Dean/Director	• Registrar	Provide Detail information about course characteristic fees
5	Orientation	Students	Within 8 wks receipts of Admission Letter	Petition to • Director, Learner Support Services • Dean/Directors	Director Learner Support Services	Matching Students qualifications with admission criteria



Appendix 2

6	Registration	Students	Within 8 wks of Conclusion of Orientation	<ul style="list-style-type: none"> <li>Registrar</li> <li>Dean/Director</li> </ul>	Deans/Directors of relevant Academic Units	To be completed within acceptable period Otherwise students pay specified levy after period of grace
7	Delivery of Instructional Materials	Students	Within 1 wk of Conclusion registration	<ul style="list-style-type: none"> <li>Petition to Centre Director</li> <li>Dean/Director</li> <li>DIRD</li> </ul>	Deans/Directors of relevant Academic Units	<ul style="list-style-type: none"> <li>i) Review process involved in development of courses.</li> <li>ii) Review process in adaptation of courses</li> <li>iii) Ensure competence of reviewer</li> </ul>
8	Guidance Services	Students Public Staff	Within 1 hour to 2 days of complaint	<ul style="list-style-type: none"> <li>Petition to Centre Director</li> <li>Director</li> <li>Learner Service</li> <li>Vice-Chancellor</li> </ul>	Director, Learner Support Services	
9	Tutorial Sessions	Students	Within 2 wks of intended class	<ul style="list-style-type: none"> <li>Petition to Centre Director</li> <li>Dean/Director</li> <li>Head of Programme unit</li> </ul>	<ul style="list-style-type: none"> <li>Deans/Directors of relevant Academic Units</li> <li>Head of Programme unit</li> </ul>	<ul style="list-style-type: none"> <li>i) Effective monitoring of scheduled times</li> <li>ii) Effective monitoring of personnel for tutorial classes</li> </ul>
10	Practical Classes	Students	Within 2 wks of intended class	<ul style="list-style-type: none"> <li>Petition to Centre Manager</li> <li>Academic Registrar</li> <li>Dean/Director</li> </ul>	<ul style="list-style-type: none"> <li>Deans/Directors of Relevant Academic Units</li> <li>Head of Programme unit</li> </ul>	<ul style="list-style-type: none"> <li>i) Ensure Quality</li> <li>ii) Security</li> <li>iii) Mode of delivery</li> </ul>
11	Tutor-marked Assignment & Examination	Students	Within 2 wks of stipulated time	<ul style="list-style-type: none"> <li>Petition to Centre Manager</li> <li>Dean/Director</li> <li>Programmer Leader</li> </ul>	<ul style="list-style-type: none"> <li>Deans/Directors of Relevant Academic Units</li> <li>Head of Programme unit</li> </ul>	Release results promptly through the academic office.
12	Release of Results	Students	Within 6 wks of completion of examination	<ul style="list-style-type: none"> <li>Petition to Centre Director</li> <li>Dean/Director</li> <li>Registrar</li> </ul>	<ul style="list-style-type: none"> <li>Deans/Directors of Relevant Academic Units</li> <li>Head of Programme unit</li> </ul>	Release results promptly through the academic office.

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