

AMBROSE ALLI UNIVERSITY, EKPOMA
DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
HANDBOOK FOR 3 OPTIONS/PROGRAMS: AGRICULTURAL SCIENCE
EDUCATION, HOME ECONOMICS EDUCATION AND TECHNICAL EDUCATION

HISTORY OF THE PROGRAMME/SUB-DISCIPLINE/DISCIPLINE

Ambrose Alli University, Ekpoma was established by the First executive Governor of the Defunct Bendel State, Professor Ambrose Folorunsho Alli in 1982. The University was opened for full academic operations on January 15, 1982. Under a Collegiate structure, the College of Education was one of the eight Colleges which started in the University. The College of Education started with 13 lecturers and Professor J. U. Aisiku was the first Rector of the College. The College of Education started with 44 students, who matriculated along with other students on February 6, 1982. In 1983, the then Executive Governor of Bendel State, Dr. S. O. Ogbemudia instituted a visitation panel on the University. The outcome of the report led to the rationalization of three Colleges, namely, the College of Education, College of Agriculture and College of Medical Sciences by Gen. Jeremiah T. Useni, Military Administrator of the State.

During the 1985/1986 academic session, the Faculty of Education was reopened in the University and was housed in the then College of Education, Abraka. That led to the transformation of the College of Education, Abraka (an N. C. E awarding institution) to become a campus of Bendel State University. Following the creation of additional States in the Federation of Nigeria, the then Faculty of Education of the University which was situated at Abraka was acquired by the Delta State Government and upgraded to a full University.

Following the acquisition of the Abraka campus of the then Bendel State University by the Delta State Government, it became obvious that the Ekpoma main campus of the University which was renamed Edo State University, Ekpoma was without a Faculty of Education. Thus, during the

1992/93 academic session, Senate of the University recommended the establishment of the Faculty of Education for the University, which was established and had Professor J. U. Aisiku as the Dean.

The Faculty operated then under three Departments: Department of Educational Foundations, Department of Curriculum and Instruction and the Department of Vocational and Technical Education. In 1996/1997 session Department of Physical and Health Education was separated from the Department of Vocational and Technical Education as they were one Department before then. As at that time, the Department offers five degrees options namely, Agriculture Education, Business Education (Accounting and Secretary Education), Home Economics Education and Industrial Technical Education

In 1997/1998 session, because of lack of manpower, accommodation facilities and other modalities for accreditation purpose, Industrial Technical Education curriculum approved by the Senate was suspended and a new programme the 'Technology Education' was put in place instead of the 'Industrial Technical Education', which is being offered till date. It is now that plans are under way to restore back the Industrial Technical Education curriculum approved by Senate of the University to replace the Technology Education

In the history of the Department, the following persons has emerged as Acting Head in the Department: Prof. A. Momodu, Prof. M. O. Omo-Ojugo, Prof. Don. Omoike, Dr. Osemota, Dr. A. I. Iseguan, Prof. E. O. Imhanlahimi, Prof. Efoghe, Prof. E. E. Idialu, Prof. R. Uwameiye, Dr. J. A. Adavbiele, Dr. Rev. P. S. O. Uddin, Dr. G. O. Agbonghale, and Dr. Mrs. B. E. Uwameiye.

The Department has just in 2015/2016 session started the higher Degree programme in MEd, MEd/M.Phil and PhD in Home Economics Education and Technical Education.

GUIDELINES OF THE COURSE SYSTEM

1. CATEGORIZATION OF COURSES:

- 1. CORE COURSES (C):** These are courses within the discipline which must be taken and passed.
- 2. REQUIRED COURSE (R):** These are courses outside the discipline which must be taken on the advice of the Department and passed.
- 3. GENERAL STUDIES COURSES (G):** These are courses of the General Studies Programme which must be taken and passed.
- 4. ELECTIVE COURSES (E):** These are courses within or outside the discipline that are to be taken to meet the requirements of a particular degree programme but need not be passed.
- 5. PRE-REQUISITE COURSES:** Pre-requisite courses are courses the knowledge of which is needed prior to the taking of other specified courses. A student is deemed to have obtained this pre-requisite knowledge if he/she obtains a mark not less than 30% but will not be credited with any units in the course concerned except he/she scores a minimum of 40%. This particular clause is without prejudice to Faculty requirements.

II. COURSE ASSESSMENT:

- Every course assessment must consist of continuous assessment
- (between 20% and 40%) and course examination (between 60% and 80%).
- The pass mark for every course assessment is 40%.
- The grading system is as follows:

Scores	Grade	Grade Point
70-100	A	5
60-69	B	4
50-59	C	3
45-49	D	2
0-39	F	0

However, the university has started implementing NUC new grading system with effect from 2013/2014 session.

- Students' results are to be prepared at the end of every session reflecting the units taken, the units passed (accumulated) and the semester's G.P.A.
- At the end of every session students' results are prepared reflecting the units taken during the session, the units passed during the session, the cumulative Grade point average (CGPA), the courses failed for the session and the over-all result of proceeding, on probation or withdrawal from the (degree) programme.

- (g) At the end of the degree programme students' results are prepared reflecting total units registered in the programme, total units passed in the programme, CGPA. Courses failed and degree classification according to the following scheme.

CGPA	CLASS OF DEGREE
4.50-5.0	First Class
3.50-4.49	2 nd Class Upper
2.40-3.49	2 nd Class Lower
1.50-2.39	Third Class
Less Than 1.50	Fail

This is for the old students.

- (h) The CGPA for a student is determined in the following manner:

- (i) For each session the weighted grade point is obtained for each course as the product of the grade point and the units for the course.
- (ii) The total weighted grade points and the total units are obtained for each session.
- (iii) The sum of the total weighted grade points for all the sessions and the sum of the total units for all the sessions are calculated to give the cumulative weighted grade points and the cumulative units respectively.
- (ii) On dividing the cumulative weighted grade points by the cumulative units one obtains the cumulative Grade Point Average (CGPA).
- (h) As an example consider a student who takes seven courses in a session with the following details:

	Units (a)	Mark (B)	Grade (c)	Grade Point (d)	Weighted Grade Point (a) x (d)
Course 1	3	62	B	4	12
Course 2	3	51	C	3	9
Course 3	3	48	D	2	6
Course 4	2	33	F	0	0
Course 5	3	45	D	2	6
Course 6	2	52	C	3	6
Course 7	3	42	D	2	6
					45

- (ii) If a student has the following results over four sessions:

$$\begin{array}{rcl}
 \text{Then cumulative weighted grade point} & = & 284 \\
 \text{Cumulative Units} & = & 164 \\
 \text{Hence, CGPA} & = & 1.73
 \end{array}$$

The student will therefore come up in the third class degree classification.

“ There is no reference in any course examination.

“ There is no repeat in the course system. Therefore a student cannot re-register for a course already passed.

“ A student must accumulate at least 30 units per level before graduation.

- “ There is no weighting of sessional GPA in the computation of CGPA.
- “ In the computation of the CGPA all courses taken in the session will be used, and therefore no course will be disregarded or discountenanced.

PROBATION:

1. A student who makes a CGPA of 1.50 or more at the end of the session will proceed to the next level of the degree programmed for which he is registered.
2. A student who makes a CGPA of less than 1.50 at the end of the session will be on probation for the following session to enable him/her improve on the CGPA. During that session he must register for the appropriate core-courses, required courses and GST courses which he/she has not passed, and any other courses for which he/she has the pre-requisites.
3. A student on probation during a session who makes a CGPA of less than 1.50 during that session must withdraw from the degree programme for which he is registered.
4. If the student changes to a new degree programme and obtains a CGPA of less than 1.50 in the new degree programme he/she will again be on probation. If however he obtains a CGPA of less than 1.50 a second time in the new degree programme he/she will be asked to withdraw from the University.

TRANSFER:

1. Every student seeking transfer from one degree programme to another must complete the necessary forms within the stipulated time.
2. All courses taken in the previous degree programme will be used for the computation of the CGPA for the new degree programme.
3. All regulations in respect of the new degree programme concerning core courses, required courses, etc., must be met before graduation.

B.Sc. TECHNICAL EDUCATION PROGRAMME

1. Programme Title: B.Sc. Technical Education

2. Philosophy: There is ever increasing demand for highly qualified teachers in Nigeria. The aim of the faculty is therefore to produce academically and professionally qualified teachers and administrators for the post-primary, post-secondary institutions and other education sectors. The department shall prepare students for the award of B.Sc. Technical Education, Degree of this University. The programme shall acquaint the students with basic theoretical and practical tools and techniques required for their future professional work in teaching and industries.

3. Objectives: The programmes are designed to achieve the following objectives:

- i. To produce graduates who can teach effectively at the senior secondary schools and tertiary institutions.
- ii. To equip graduates to pursue work in education

- iii. To enable them to fit into administrative cadre in government and in institutions of higher learning.
- iv. To acquire skills and competence required for self-reliance and self-employment if the need arises.

4. Admission Requirements:

In addition to the general University requirements, the following regulations shall apply to the admission of students into the Department.

A. UME – Four-Year Programme

A candidate applying for a Bachelor of Science in Technical Education must meet the Tertiary Matriculation Examination (UTME) or Joint Admission and Matriculation Board (JAMB) requirements and in addition possess any of the following:

- i. West African Senior Secondary School Certificate or NECO or NABTEB with least five credit passes in not more than two sittings. The credit passes must include Mathematics and English, Physics or Chemistry plus any other relevant subjects.
- ii. National Technical Certificate (NTC) with credit passes in five subjects in not more than two sittings which must include Mathematics, English, Physics or Chemistry.
- iii. City and Guilds Certificate (Intermediate) in Electrical, Mechanical, Engineering subjects plus Federal Craft Certificate (FCC) with at least “C” grade in five subjects which must include Mathematics and English.
- iv. Teachers’ Grade II Certificate (TCII) with credit or merit passes in at least five subjects which must include Mathematics, English and General Science.

B Direct Entry Requirement (3 Years Programme)

Candidates with any of the following qualifications will be admitted into three years programme, provided they satisfy the university basic entry requirements. In addition, candidates must possess any one of the following:

- i N.C.E. (Technical)
- ii National Diploma (N.D.) or Advanced National Technical Certificate (ANTC) in relevant areas.
- iii City and Guilds (Finals) or Engineering Technicians Part II Certificate
- iv N.C.E. with a minimum of two passes in Physics/Chemistry, Chemistry/Mathematics, Physics/Mathematics and a pass in Education.

PROGRAMME/SUB-DISCIPLINE/DISCIPLINE STRUCTURE TO INCLUDE PERIODIC OF FORMAL STUDIES IN THE UNIVERSITIES, INDUSTRIAL TRAINING, PLANNED VISIT AND PROJECTS

Period of formal studies is one academic year, which covers the first and second semester. Each semester takes fifteen weeks. Students of Technical Education Programme are required to go for Industrial Work Experience Scheme in relevant engineering firms. Such industrial attachment is arranged during the second semester of the 300 level.

Students register for 15 units of industrial work experience (SIWES). Planned visit or field trip are arranged for students at least once before graduation to enable them develop insight into the operation in industrial centres such as power generating station, oil refinery, assembly plants for computer, automobile, cement factory, radio and television stations. In order to make such field trip a learning activity, the lecturer usually set up the objectives before the trip takes place. Students construct practical projects in the various areas of Technical Education as well as engage in group independent investigation of research topics pertinent to technical education in Nigeria.

TECHNICAL EDUCATION PROGRAMME B. SC (Ed) TECHNICAL EDUCATION

FOUR YEAR PROGRAMME IN TECHNICAL EDUCATION

100 LEVEL

FIRST SEMESTER

COURSE CODE	TITLE	UNITS	STATUS
EDU 100	Introduction to Teaching Profession	2	C
EDU 101	History of Education	2	C
EDU 102	Development Psychology	2	C
GST 101	Use of English and Library	4	C
CSC 101	Introduction to Computer Science	2	C
MTH 101	Elementary Maths 1 Algebra and Trigonometry	3	C
TED 101	Introduction to Technical Drawing	2	C
TED 102	Introduction to Building Construction	2	C
TED 103	Introduction to Metalwork Technology	2	C

Total Units = 21 units
 Total electives courses = 00 units

SECOND SEMESTER

COURSE CODE	TITLE	UNITS	STATUS
EDU 113	Introduction to Science and Technology Education	2	C
EDU 115	Introduction to Special Education	2	E

GST	111	Nigerian People and Culture	2	C
GST	112	History and Philosophy of Science	2	C
TED	111	Health and Industrial Safety	2	C
TED	112	Building Construction and Material I	2	C
TED	113	Introduction to Electrical Technology	2	C
TED	114	Technical Drawing	3	C
TED	115	Introduction to Automobile Technology	2	C

Total core courses = 19 units
Total electives courses = 00 units

SUMMARY

Total units of core courses for the session = 40 units
Total units of electives courses for the session = 00 units
Grand Total = 40 units

200 LEVEL

FIRST SEMESTER

COURSE CODE	TITLE	UNITS	STATUS
EDU 201	Philosophy of Education	2	C
EDU 202	Curriculum and Instruction	2	C
ENT 201	Entrepreneurship Studies I	2	C
VTE 201	VTE in Nigeria and other Countries	2	C
TED 201	Technical Drawing I	2	C
TED 202	Building Construction and Material	2	C
TED 203	Metalwork Technology II	2	C
TED 204	Structural Mechanics & Strength of Materials	2	C
TED 205	Electricity Technology	2	C

Total core courses = 18 units
Total electives courses = 00 units

SECOND SEMESTER

COURSE CODE	TITLE	UNITS	STATUS
EDU 211	Method of Teaching Industrial Technical Education	3	C
EDU 212	Measurement and Evolution	3	C
EDU 213	Sociology of Education	2	C
EDU 312	Research Methods and Data Processing	3	C

ENT	211	Entrepreneurship Studies II	2	C
GST	222	Peace and Conflict Resolution	2	C
VTE	211	Computer Technology	2	C
TED	211	Technical Drawing II	2	C
TED	212	Building Construction and Material II	2	C
TED	213	Engine Details/Transmission System	2	C
TED	214	Telecommunication Principles	2	C

Total Units = 27 units
Total electives courses = 00 units

SUMMARY

Total units of core courses for the session = 45 units
Total units of electives courses for the session = 00 units
Grand Total = 45 units

300 LEVEL

FIRST SEMESTER

FIRST SEMESTER

COURSE CODE	TITLE	UNITS	STATUS
EDU 300	Teaching Practice	3	C
EDU 301	Educational Administration & Planning	2	C
EDU 302	Educational Technology	2	C
VTE 301	Time Management	2	C
TED 301	Technical Drawing III	2	C
TED 302	Woodwork Technology	2	C
TED 303	Reinforced Concrete Design	2	C
TED 304	Mechanical Workshop Practice	2	C
TED 305	Breaking Suspension and Steering System	2	C
TED 306	Electrical/Electronics Mechanics	2	C

Total Units = 21 units
Total electives courses = 00 units

SECOND SEMESTER

COURSE CODE	TITLE	UNITS	STATUS
VTE 311	Students Industrial Work Experience (SIWES)	15	C

Total Units = 15 units
Total electives courses = 00 units

SUMMARY

Total units of core courses for the session	=	36 units
Total units of electives courses for the session	=	00 units
Grand Total	=	36 units

400LEVEL**FIRST SEMESTER**

COURSE CODE	TITLE	UNITS	STATUS
EDU 400	Project	6	C
EDU 401	Practical Teaching	3	C
EDU 402	Guidance and Counselling	2	C
EDU 403	Continuous Assessment	2	C
TED 401	Law of Contract	2	C
TED 402	Glass and Plastics in Building	2	C
TED 403	Automobile Technology	2	C
TED 404	Building Services, Maintenance & Equipment	2	C
TED 405	Electronics Circuit Laboratory	2	C

Total Units	=	23 units
Total electives courses	=	00 units

SECOND SEMESTER

COURSE CODE	TITLE	UNITS	STATUS
EDU 411	Organization of Primary and Secondary School	2	C
EDU 413	Comparative Education	2	C
EDU 311	Educational Psychology	2	C
VTE 411	Professional Seminar	2	C
TED 411	Electronics Power Technology	2	C
TED 412	Quantity Surveying	2	C
TED 413	Improvisation of Laboratory/Workshop Equipment	2	C
TED 414	Practical Project Design in Special Area	2	C
TED 415	Fabrication Technology	2	C
TED 416	Building Drawing	2	C
TED 417	Wood Constructional Methods	2	C
TED 418	Engine Lubrication/Cooling System	2	C
TED 419	Electrical/Electronics Drafting	2	C

Total Units	=	26 units
Total electives courses	=	00 units

SUMMARY

Total units of core courses for the session	=	49 units
Total units of electives courses for the session	=	00 units
Grand Total	=	49 units

AGRICULTURAL SCIENCE EDUCATION PROGRAMMES

PHILOSOPHY

The Department shall prepare student for award of B.Sc Agricultural Education Degree of this University. The programme aims at equipping student at the Senior Secondary School level and practical Agriculture at the Junior Secondary School level.

Objectives

The programme is designed to achieve the following objectives:

1. To produce graduates who can teach very effectively at the secondary schools and tertiary institutions
2. To equip graduates to pursue graduate work in education
3. To enable them fit into administrative cadre in government and institutions of higher learning
4. To produce skilled manpower with a strong background required for self- reliance and self-employment if the need arise.

Admission Requirements

- i. **UTME – Four Year Programme**

A candidate must have at least FIVE credit passes in Senior Secondary Certificate Examination or NECO or its equivalent in not more than two sittings including English Language, Mathematics, Agricultural Science and Biology.

ii. **Direct Entry – Three Year Programme**

Candidate for Direct Entry must possess one of the following:

- (a) Passes at merit levels in at least two subjects in NCE with GCE O/L credit or its equivalent in three other subjects excluding teaching practical.
- (b) Passes in two relevant subjects at A/L with GCE O/L credits or its equivalent in three other subjects at not more than two sittings.
- (c) Passes at merit level in a relevant Diploma programme of recognized university in addition to three O/L credit passes.

COURSE: Agricultural Science Education

LEVEL: 100

FIRST SEMESTER

COURSE CODE	TITLE	UNITS	
EDU 100	Introduction to Teaching Profession	2	C
EDU 101	History of Education	2	C
EDU 102	Developmental Psychology	2	C
GST 101	Use of English and Library	4	C
GST 102	Philosophy and Logic	2	C
CSC 101	Introduction to Computer Science	2	C
CHM 101	General Chemistry I	3	C
BIO 101	General Biology I	4	C
AGR 101	Introduction to General Agriculture	3	C
TOTAL		24	

SECOND SEMESTER

EDU 113	Introduction to Science and Technical Education	2	C
GST 111	Nigerian People and Culture	2	C

GST	112	History and Philosophy of Education	2	C
BED	111	Office Practice	2	C
CHM	112	General Chemistry II	3	C
ACC	111	General Biology II	4	C
PHY	103	General Physics Laboratory	2	C
AGR	111	Farms Practical	<u>2</u>	
TOTAL			<u>17</u>	
EDU	114	Introduction to Adult Education	2	E
EDU	115	Introduction to Special Education	<u>2</u>	E
			<u>4</u>	
At least one elective				
GRAND TOTAL			24 + 19 =	43

COURSE: Agricultural Science Education
LEVEL: 200

FIRST SEMESTER

COURSE CODE	TITLE	UNITS
EDU 201	Philosophy of Education	2 C
EDU 202	Curriculum and Instruction	2 C
ENT 201	Entrepreneurship Education I	2 C
AED 201	Climatology and Biogeography	2 C
AED 202	Anatomy and Physiology of Farm Animal	2 C
AGR 203	Introduction to Crop Protection	<u>3</u> C
TOTAL		<u>13</u>

FOR DIRECT ENTRY (They add these)

GST 101	Use of English and Library	4
GST 102	Philosophy and Logic	2
CSC 101	Introduction to Computer Science	<u>2</u>
Grand Total		<u>8</u>
		<u>21</u>

SECOND SEMESTER

EDU 211	Subject Methodology	3 C
EDU 212	Measurement and Evaluation	3 C
EDU 213	Sociology of Education	2 C
EDU 312	Research Method and Data Processing	3 C
GST 222	Peace and Conflict Resolution	2 C
ENT 211	Entrepreneurship Education II	2 C

AED	211	Principle of Crop Production	3	C
AGR	212	Principles of Soil Science	3	C
AED	214	Introductory Agriculture Biochemistry	3	C
AED	215	Principle of Animal Production	3	C
		TOTAL	<u>27</u>	

FOR DIRECT ENTRY (They add these)

GST	111	Nigerian People and Culture	2	C
GST	112	History and Philosophy of Science	<u>2</u>	C
		Grand Total	<u>4</u>	
			<u>25</u>	

Normal Entry	13 + 27 =	40
Direct Entry	21 + 27 =	48

COURSE: Agricultural Science Education

LEVEL: 300

FIRST SEMESTER

COURSE

CODE	TITLE	UNITS
EDU 300	Teaching Practice	3 C
EDU 301	Educational Administration and Planning	2 C
EDU 302	Educational Technology	2 C
AGR 205	Crop Anatomy, Taxonomy and Physiology	3 C
AGR 301	Non-Ruminant Animal Production	3 C
AGR 304	Introduction to Pedology and Physics	3 C
AGR 307	Ruminant Animal Production	3 C
VTE 301	VTE in Nigeria and other countries	2 C
VTE 308	Computer Technology	<u>2</u> C
	TOTAL	<u>23</u>

SECOND SEMESTER

VTE	311	Student Industrial Work Experience	<u>15</u>	C
		GRAND TOTAL	23 + 15 =	38

COURSE: Agricultural Science Education

LEVEL: 400

FIRST SEMESTER

COURSE CODE	TITLE	UNITS	
VTE 400	Research Project/Seminar	6	C
EDU 401	Practical Teaching	3	C
EDU 402	Guidance and Counseling	2	C
EDU 403	Continuous Assessment	2	C
CRP 501	Crop Husbandry	4	C
AGE 506	Admin. Sup. In Extension I	3	C
	TOTAL	20	

SECOND SEMESTER

EDU 311	Educational Psychology	2	C
EDU 411	Organization of Primary and Secondary Education	2	C
EDU 413	Comparative Education	2	C
AGR 311	Permanent Crop Production	3	C
AGR 312	Soil Chemistry and Microbiology	3	C
AGR 314	Extension Teaching Learning Process & Method	3	C
AGR 315	Agriculture Biochemistry and Methods	3	C
AGE 511	Agric Business Management and Accounting	2	C
	TOTAL	<u>20</u>	

GRAND TOTAL 20 + 20 = 40

HOME ECONOMICS COURSES

100 LEVEL

FIRST SEMESTER

EDU 100	Introduction to teaching profession	2	C
EDU101	History of education	2	C
EDU 102	Developmental psychology	2	C
GST 101	Use of English and library	4	C
GST 102	Philosophy and logic	2	C
CSC 101	Introduction to computer science	2	C
HEC 101	Introduction to Home Economics	2	C
HEC 102	Introduction to clothing and textile	2	C
HEC 103	Introduction to Nutrition	2	C
CHM 101	General chemistry 1	3	C

SECOND SEMESTER

EDU 113	Introduction to Science and technology	2	C
GST 111	Nigerian people and culture	2	C

GST 112	History and philosophy of education	2	C
HEC 111	Applied Home Economics	3	C
HEC 112	Principles of food preparation	2	C
HEC 113	Clothing techniques	2	C
HEC 114	Meal management and service	2	C
HEC 115	Principles of Home management	2	C

ELECTIVES

EDU 114	Introduction to Adult Education	2	E
EDU 115	Introduction to Special Education	2	E

200 LEVEL

FIRST SEMESTER

EDU 201	Philosophy of Education	2	C
EDU 202	Curriculum and Instruction	2	C
ENT 201	Entrepreneurship Education 1	2	C
HEC 201	Work Simplification and Household Equipment	2	C
HEC 202	Recipe Development and Testing	2	C
HEC 203	Pattern Drafting and Alteration	2	C
HEC 204	Principles of Nutrition	2	C
CHM 203	Organic Chemistry	3	C

FOR DIRECT ENTRY (They add these)

GST 101	Use of English and Library	4	C
GST 102	Philosophy and Logic	2	C
CSC 101	Introduction to Computer Science	2	C

SECOND SEMESTER

EDU 211	Subject Methodology	3	C
EDU 212	Measurement and Evaluation	3	C
EDU 213	Sociology and Education	2	C
EDU 312	Research Method and Data Processing	3	C
GST 222	Peace and Conflict Resolution	2	C
ENT 211	Entrepreneurship Education II	2	C
HEC 211	Clothing Design by Flat Pattern	2	C

FOR DIRECT ENTRY (They add these)

GST 111	Nigerian People and Culture	2	C
GST 112	History and Philosophy of Science	2	C

300 LEVEL

FIRST SEMESTER

EDU 300	Teaching Practice	3	C
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EDU 301	Educational Administration and Planning	2	C
EDU 302	Educational Technology	2	C
HEC 301	Food Preparation	2	C
HEC 302	Basic clothing Construction	3	C
HEC 303	Nutrition in Health and Diseases	2	C
HEC 304	Consumer Education	2	C
VTE 301	VTE in Nigeria and Other Countries	2	C
VTE 308	Computer Technology	2	C

SECOND SEMESTER

VTE 311	Student Industrial Work Experience Scheme	15	C
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400 LEVEL

FIRST SEMESTER

EDU 400	Research Project/Seminar	6	C
EDU 401	Practical Teaching	3	C
EDU 402	Guidance and Counseling	2	C
EDU 403	Continuous Assessment	2	C
HEC 401	Advanced Clothing Construction	3	C
HEC 402	Clothing Maintenance	2	C
HEC 403	Community Nutrition	2	C
HEC 404	Home Management Residence	2	C

SECOND SEMESTER

EDU 311	Educational Psychology	2	C
EDU 411	Organization of Primary and Secondary Education	2	C
EDU 413	Comparative Education	2	C
HEC 411	Family Relationship	2	C
HEC 412	Housing and Interior Decoration	2	C
HEC 413	Needs of Special People	2	C
HEC 414	Extension Programme in Home Economics	2	C

COURSE DESCRIPTION

100 LEVEL

FIRST SEMESTER

TED 101: Introduction to Technical Drawing 1

Use of Technical Drawing as a graphic language, drawing equipment and instruments, type of drawing board practice, drawing papers, mounting paper on drawing board, layout, title block styles, constructions, areas of plane figures, and pictorial drawings.

TED 102: Introduction to Building Construction

General principles of building construction, building construction tools, site plans, site preparation, setting out and elementary surveying, foundation, Damp Proof Course (DPC), mass-concrete, walls and timbering to trenches.

TED 103: Introduction to Metal Work Technology

Metals and non-metals, preparation and extraction of metals, properties and characteristics of metals, ferrous and non-ferrous metals, uses of metals, basic hand tools in a metal shop.

SECOND SEMESTER

TED 111: Industrial Safety

Concept of safety, definition of industrial safety, safety education, hazard to safety and types of hazards, hazardous manifestations, safety measures, first aid treatment, accident prevention and management, causes and nature of industrial accidents, and good house and workshop keeping.

TED 112: Building Construction and Material 1

Detailing of elements of buildings of all types: residential, industrial, commercial, etc, sub-soil and conditions, non-load bearing and load bearing walls, types of floors and roofs. Drainage, external works and landscaping.

TED 113: Introduction to Electrical/Electronics Technology

Method of producing electricity, measurement of voltage, current and resistance to D.C. circuit power, primary and secondary cells, Basic electric circuits analysis, network theories, inductance and capacitance in disc circuits, resistance combination, magnetism and magnetic circuits, basic electrical/electronic tools and equipment, electronic symbols.

TED 114: Technical Drawing II

Solid geometry, advanced geometrical construction, conic sections, intersection of surfaces, locus problems, principle of tangency, pictorial and perspective projections, isometric scales and isometric projections, oblique projections, freehand sketching of solid, introduction to orthographic drawings.

TED 115: Introduction to Automobile Technology

Introductory explanation on the function of a car, its types and uses; basic discussion on the parts of an automobile:

- The Engine, its parts and materials for construction
- The clutch system
- The gearbox system

- Suspension, steering and lubricating system
- The electrical parts of the vehicle and its function.

200 LEVEL

FIRST SEMESTER

TED 201: Technical Drawing III

Interpretation of drawings, conversion of pictorial views and simple sectional views, parts drawings, preparation of working drawings, assembly drawing, and exploded views, cam construction, steel structural graphics, complex jigs and fixtures.

TED 202: Building Construction and Material II

Building regulations, partitions, doors and windows, roofs, internal finishing and external renderings.

TED 203: Metal Work Technology

Cutting tools: high carbon, medium carbon and low carbon steel, as used for cutting; other cutting tools used in metal workshop: tunsen, cementits, etc; metal lathe: parts, uses and operation; tool holders and work holding devices; types of chuck and their uses. Drilling machine: parts, uses, and operation; grinding machine: parts, uses, and operation; milling machines: types of milling machines, and their cutters; various types and uses of milling cutters; methods of controlling table movement, power machine types, uses, and operations; and shaping machine: types, uses and operation.

TED 204: Structural Mechanics and Strength of Materials

Stress and strain, plane framework, resolution and resolution forces, moment, roof truss and structural analysis.

TED 205: Electrical Technology

Basic A-C principles, sinusoidal rotation plotting and obtaining A-C values, Inductive, capacitive, resistive circuits A-C power; series and parallel A-C circuits; principle of electronic tubes – types, characteristics and applications; semi-conductor materials and conduction PN unction.

SECOND SEMESTER

TED 211: Woodwork Technology 1

Botany, growth structure and identification of solid timber, its usages, market forms; introduction to woodwork tools and machines used in woodwork joints and joining; types of timber; sawing or conversion, seasoning, defects of timber, manufacture boards, woodwork joints, woodwork machines, machine preparation for timber, surface planer, saws, drills and shapes, etc; and their uses in simple projects.

TED 212: Building Construction and Materials III

Chimneys and flues, stairways, scaffoldings, plumbing arrangement system, electricity and gas services and external works.

TED 213: Engine Details/Transmission System

Understanding the functions of an automobile engine; Engine and its parts: engine block, top cylinders, valves, pistons, rings, connecting rods, flywheel, crankshaft, camshaft, etc. two stroke and four stroke spark ignition and compression ignition engine carburetor, its function, how the engine run the wheels; the transmission channels, purpose, types and uses of gearbox, clutch, propeller shaft and final drives, axle and road wheels. Automatic transmission system. Transmission without propeller shaft.

TED 214: Telecommunication Principle

Electromagnetic waves, method of propagation of waves, modulation and side bands; transmitter: two ways and four ways communication system and application.

VTE 211: Computer Technology

Computer utilization for instructional purposes. Using computer to assist in teaching tutorials, drills and practice. Computer software: important parts of the computer system, the operating system, topics of programmes which affect the operating system. Modes of operation and the electrical language used by the computer (code).

Cataloging the software, compare hardware, identification of hardware; description, function and types of input and output devices. The control processing and storage units. Basic components and function of a computer.

300 LEVEL

FIRST SEMESTER

TED 301: Technical Drawing IV

Orthographic projections in first and third angle projections, sectional views, auxiliary views and projections, advance conic auxiliary projections, lines in space and links mechanism.

TED 302: Woodwork Technology II

Iron-mongery with emphasis on carpentry and joinery and building construction contemporary and advanced methods of wood joinery modern techniques and machines work and decorative techniques.

TED 303: Reinforced Concrete Design

Introduction to reinforce concrete structures, water, aggregates, and cement; design and detailing of columns, reinforced concrete walls, bonds and limit state of cracking in building, concrete mixing, curing, and compacting of concrete. Technical report in building.

TED 304: Mechanical Workshop Practical

Forging and machining, application of the lathe machine in boring, screw cutting, V-threads, simple and double square threads including some threads, milling of flat surfaces.

TED 305: Braking, Suspension and Steering System

Brakes: function, uses and types – drum and disc brakes; hydraulic system. How the cylinder work together; working parts of drum and disc brakes; brake lining design and uses; parking brakes: types and operations; serro assisted system, hydro-pneu-matic suspension; steering – what the

mechanism has to do, types and operation; steering arrangement; toe in and toe out; steering ratio; camber and castor angles; power assisted steering.

TED 306: Electrical/Electronics Machine

Transformer principles, direct current motors and generators, armature winding, two and three phase connection, delta and star connection; synchronous generators and motors. Meter character.

VTE 301: Time Management

This course is designed to equip the students with the ability to manage and use time effectively. To achieve this, the students should know: (i) the importance of time; (ii) Time waste elements; and (iii) effective time-use in management functions – planning, organizing, implementing, and evaluation.

SECOND SEMESTER

VTE 311: Students' Industrial Work Experience (SIWES)

Supervised learning activity consisting of practical work experience in industry. Acquisition of technical competence in latest and emerging technologies in business and industries. Students will be provided with opportunities to acquire up-to-date information on latest concepts, procedures and equipment used in their areas of specialization.

400 LEVEL

FIRST SEMESTER

TED 401: Law of Contract

Formation of building contracts: essentials, offer and acceptance; Implied terms, mistakes, and misinterpretation.

- Types of contract: lump sum, schedule, cost reimbursement, selection of contractor objective and subjective criteria time of appointment; reason for subtracting and nominating.
- Contractor's obligation to carry out and complete the work; definition of works: meaning of completion, sectional completion, substantial compliance, excuses for non-performance. Time for completion: extension, distinction between penalties and liquidated damages.
- Variations to work- meaning of extras work, indispensably necessary, right to vary work, form of instruction, valuation of variations, entitlement to payment for extra ex-gratia payment.
- Payments: types of certificates, purpose; firm and conclusiveness, recovery or payment in absence or certificate; valuation of work executed, materials, fluctuations, amount due to sub-contractors and contractors, right to withhold payment.
- Quality control – provision to ensure compliance in relaxation to workmanship and quality of materials, degree of supervision, liabilities of architect and clerk of work.

TED 402: Glass and Plastics in Building

Technology and manufacture, utilization in building, performance in building, maintenance problems. A critique of glass as external curtain, maintenance aspects and problems.

TED 403: Automobile Electricity

The ignition system, batteries types and its uses. Wet and dry cell batteries. Generators, dynamo and alternators: how they work. Headlamps, horn, windscreen wipers, side and rear lights. Dials and light to help the driver speedometer, millage recorder, tachometer, water temperature gauge, fuel gauge, oil pressure, temperature gauge, etc. refrigeration and air-conditioning.

TED 404: Building Services, Maintenance and Equipment

Rural and urban water supply plumbing for domestic water supply, sanitations and maintenance, electrical services in buildings and painting building maintenance problems and their solutions due to the following: foundation problems, water proof stone-work, structure frames condensation, timber defects, floors, cases sound insulation, thermal insulation, vibration, external rendering.

TED 405: Electrical/Electronics Circuit Laboratory

Radio receiver circuit, troubleshooting procedures and alignment. Troubleshooting turn-tables, cassette decks, installation of car radio sets, etc, resistors in service, parallel and series parallel, Ohms law verification, characteristics of indicators and capacitors, RC, RL, and RCL. Connection and determination of impedance diode and transistor characteristics.

SECOND SEMESTER

TED 411: Electronics Power Technology

Analogue circuit-special diodes and their applications, Zener diodes, tunnel amplifier analysis and applications. Active filters, wave form shaping, power supply specification, single and three phase rectifiers circuits. Regulated power supply, 10 regulators, voltage multiplication. Digital techniques, binary system, basic circuits, flip flops. Counters and registers. Microprocessor. Simple A/D and D/A converters, comparators digital circuit fabrication.

TED 412: Quantity Surveying

Concepts, duties of Quantity Surveyor; bill of quantities; estimating trade items, estimating preliminaries, and sub-contractors; schedule of material; valuation; cost and control and feasibility studies.

TED 413: Improvisation of Laboratory and Workshop Equipment

Detailed discussion of materials and disposable wares that are found and used in Technical laboratories and workshops in secondary/technical schools. Methods and processes for designing/fabricating these materials locally.

TED 414: Practical Project Design in Area of Specialization

Students are expected to conduct or produce a practical project in their respective area of specialization. The project must be something of value and not a model and would give students the opportunity to exhibit theoretical and practical experience acquired in the course of the programme.

TED 415: Fabrication Technology

Fabrication methods, casting and pattern design, Gorging and extrusion.

TED 416: Building Drawing

Building drawing instruments, building papers, building pencils work, tracing paper, ink, tracing pens and tracing itself; site plan; floor plan; building conventional and designs, foundation and basement; sectional details; elevations – front, sides, rear of bungalows; schedule of floors and windows, storey and multi-storey buildings, perspective drawing of building and structural details.

TED 417: Woodwork Constructional Method

Technical terms used in woodwork, elementary cabinet making, contemporary furniture sizes and design, shaping and bending of timbers, moldings. A series of drawings showing details of carcass work and drawer making. Finishing – concepts and applications; power method of finishing; laboratory work on different finishes, modern design and finishing techniques in the reproduction of completed items, a group of individuals project is required.

TED 418: Engine Lubrication and Cooling System

Reasons for cooling an engine parts of a modern cooling system- a jacket, radiator pump, fan, hoses, thermostat, pressure cap, etc. thermo siphon cooling, corrosion, water pump, air and water cooled engine need for lubrication in engines. Materials used for lubricating engine pump, oil filters and how they work, lubricants – choosing the right oil, viscosity of oil and corrosion reduction.

TED 419: Electrical/Electronics Drafting

Pictorial drawing of electrical and electronic symbols, elementary diagrams including printed circuits, block diagrams, electric wiring diagrams of houses and distribution circuits.

VTE 411: Professional Seminar

This course is designed to stimulate critical thinking and analysis of current practices, issues, problems and controversies in Technical Education. Logical presentation, effective communication skills and sensitivity to issues and problems in Technical Education will be encouraged.

COURSE CODE EDUCATION COURSE TITLES AND DESCRIPTION

EDU 100: Introduction to Teaching Profession

Definition of profession and teaching. Basic requirement needed by any occupation. Teaching in Nigeria and the contemporary debate on whether it is a profession or an occupation. Steps taken to professionalize teaching i.e. the various educational reforms.

EDU 101: History of Education.

Historical Background and education in Nigeria, colonial educational policy, and post-independence educational reforms. The course will also examine various commissions set up by Colonial govt. as well as post Independence govt. to reform educational system. And also contemporary issues and policy formulation and implementation of country educational system.

EDU 102: Developmental Psychology.

Stages of child development. i.e. prenatal and post-natal development. Development during infancy, early childhood, later childhood, adolescent and adult stage. Characteristics of children at

various stages of development and their implication for educational planning and implementation. Cognitive theories about these developments shall also be x-rayed.

EDU 113: Introduction to Science and Technology Education

Historical and philosophical base of science and technology education. The relevance of science and technology education in developing nations. Emphasis should be laid on the relevance of science and education in Nigerian aspiration towards technological development of science and technology in Nigeria will also be discussed

EDU 115: Introduction to Special Education.

Definition or meaning of special education. Categories and exceptionality in children. i.e. visual impaired mentally retarded, learning disability, ordinarily impaired or deafness, emotional will also examine methods of educating handicap children as well as gifted or talented children.

EDU 201 Philosophy of Education.

The course will examine the various philosophical principles affecting education. Philosophical theories like existentialism. Idealism and pragmatism will also be discussed. Great Philosophers like Plato, Socrates, Aristotle, e.t.c. Will also be discussed. Philosophy of pragmatism will be discussed extensively with emphasis on their impact on educational reform or development.

EDU 202 Curriculum and Instruction

Philosophical base of curriculum development will be examined. Curriculum process and theories, curriculum objectives, purpose of objectives, agencies involved in curriculum development as well as processes of curriculum evaluation will be discussed. Furthermore, strategies on curriculum innovation will be discussed. Emphasis on curriculum process should be laid on the various curriculum, models i.e. whiller's models, Talars models, etc

EDU 211 Subject Methods

This course focuses on methods on teaching with specific tropics in student area of specialization. Various teaching methods will be discussed i.e. plenary methods, Socratic methods, lecture methods, team teaching methods, etc should be thought. Furthermore, the act of designing a lesson plans and lesson notes should also be taught. Students should also be expose to micro teaching to test their proficiency in the act of using instructional techniques available to them.

EDU 212 Measurement and Education

Basic principles used in measurement and evaluation should be thought. Statistical method used in analysis of data should also be taught. Different types of data and methods of analyzing each should also be taught.

EDU 213 Sociology of Education

Sociology principles involved in education are to be discussed. Emphasis should be laid on culture, society, factors binding society together, social stratification, social mobility, and factors affecting social mobility Agencies of education together with some abnormal or deviant behaviour in the school system will also be discussed.

EDU 300 Teaching Practice

Students will be sent out for six weeks teaching practice exercise to put into practice the knowledge they have gained on course like developmental Psychology, philosophy of education, educational technology as well as educational psychology.

EDU 301 Educational Administration and Planning

Basic principles and theories of administration will be discussed. Planning in terms of programme planning of supervision strategies and general administration of schools will be discussed with emphasis on the duties of a principal or headmaster, the school inspectors, ministry of education, the function of the class teacher, inspectorate division of ministry of education in relation to supervision of instruction should be discussed.

EDU 302 Educational Technology

Historical background of educational technology, relevance of the use of technology to the business of teaching and learning should be discussed. Educational media, the use of media and the relevance of media in teaching and learning situation should be emphasized. Two and three-dimensional aids, soft and hardware, projected and non-projected aids should also be discussed. Factors militating against the use of projected aids in Nigeria should also be discussed. Furthermore, improvisation of instructional materials should be taught.

EDU 311 Educational Psychology

Various Psychological principles involves in teaching and learning should be examined e.g. Pavlov's experiment, Thorndike, Skinner, etc. the effect of these psychological theories on teaching and learning process should be examined. Individual differences and psychological make-up of the individual in relation to teaching and learning should also be examined.

EDU 312 Research Methods And Data Processing

This course will examine the meaning of research, processes involved in carrying out research. E.g. concepts like research design, research problem, formulation of research hypothesis or research questions, development and validation of research instrument, methods of collecting research data and data analysis should also be discussed. Students should be taught how to write simple research reports from either experimental or quasi-experimental studies carried out by them or from a descriptive survey. They should also be taught how to acknowledge other authorities in their work.

EDU 400 Research Project

Students are expected to carry out independent studies in their own field of specialization. Such studies are expected to focus on finding solutions to the problems of teaching and learning.

EDU 401 Practical Teaching

Students are expected to spend six weeks on industrial attachment to afford them the opportunity of the job training in their area of specialization. Such training will expose them to modern techniques of administration, or have an insight into what to expect in the world of work. Such attachment also offers the student the opportunity to put into practice the knowledge, principle and practice they earlier acquired in the classroom during such attachment.

EDU 402 Guidance and Counseling

Definition of Guidance and counseling service, counseling processes, qualities of a good counselor occupation guidance, married counseling, counseling services in schools, contemporary issues in counseling services in Nigeria.

EDU 403 Continuous Assessment

Meaning of continuous assessment, national policy on education, its emphasis on continuous assessment, the domain of continuous assessment i.e. cognitive, Psychomotor and effective domains. The use or mis-use of continuous assessment in primary and post primary schools in Nigeria. Problems and prospects of the use of continuous assessment in schools in Nigeria.

EDU 411 Organization Of Primary And Secondary Schools In Nigeria

Programme organization and policy organization of primary schools in Nigeria, emphasis on the role of ministry of education, post-primary Education Board, Local Education Authority in Policy formulation and implementation in primary and secondary education. Contemporary issues and problems plaguing primary and secondary education in Nigeria.

EDU 413 Comparative Education

This course is designed to acquaint students with the various policies and programme of different countries, towards this end emphasis will be place on British educational system, America, Ghana, Cote d' voir, China, Tanzania, Nigeria e. t. c.